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ABSTRACT

This guide to an introductory television course on exceptional children provides overviews of its 54 programs and lists critical vocabulary, required and suggested reading, and questions to consider during the reading and the telecasts. Various methods, programs, and exceptionalities are covered; articles by Laurence J. Peters on prescriptive teaching and by Harold M. Skeels on early childhood education of disadvantaged children are included; also included are a glossary and bibliographies of parent materials and standard textbooks on exceptional children. (JD)

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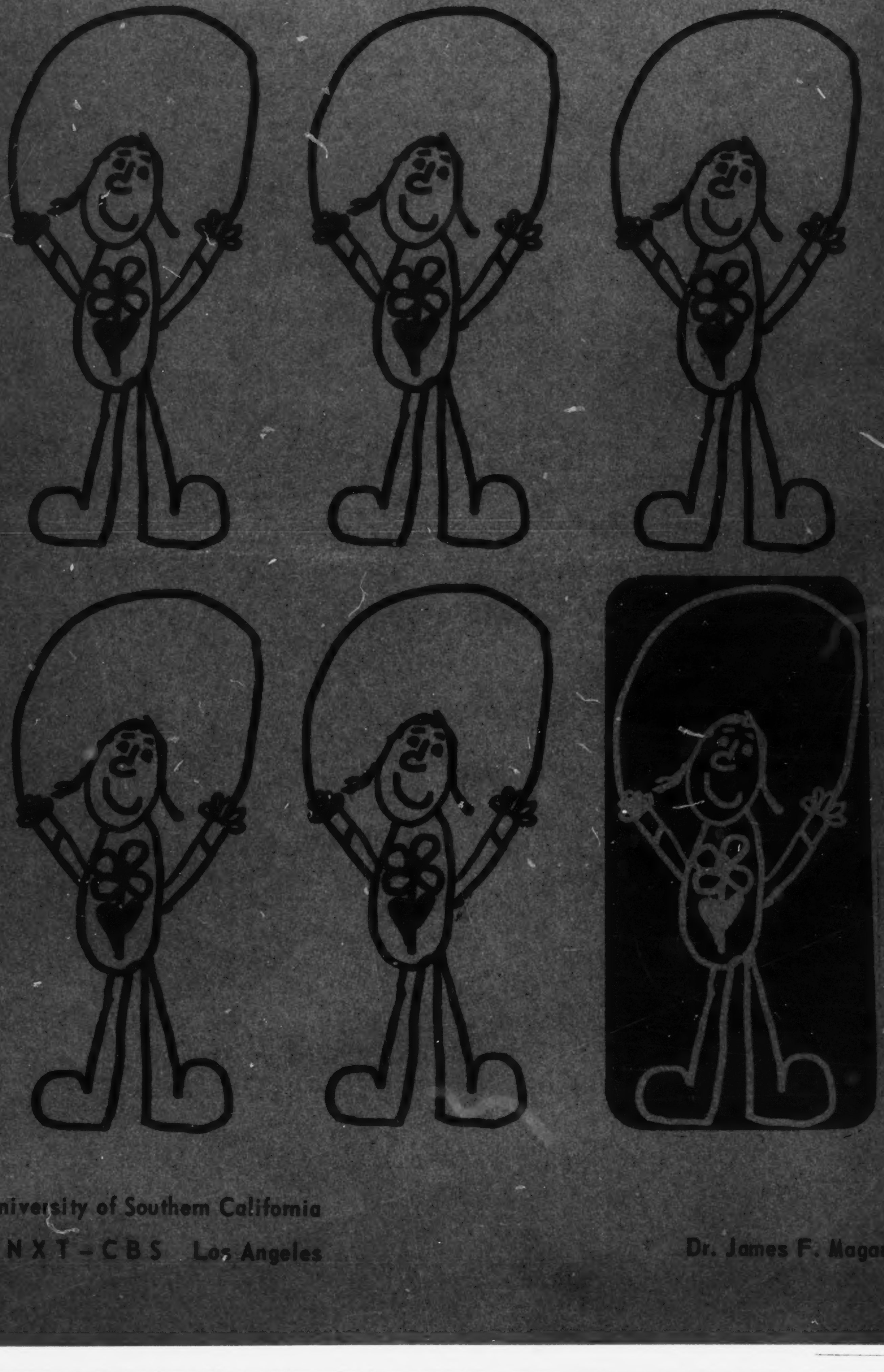
THE EXCEPTIONAL CHILD



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STUDY GUIDE
FOR
Odyssey:
"THE EXCEPTIONAL CHILD"

written by
Dr. James F. Magary
for
A Credit Course
Presented by
The School of Education
and
University College

University of Southern California

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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THE EXCEPTIONAL CHILD

Forward

This study guide does not serve as a replacement for a textbook, but rather as a guide. This guide is organized to assist you in your study and understanding of exceptional children and youth. It contains questions and materials not generally included in texts on exceptional children. Space has been allotted for your notes and for such important insertions as additional books, periodicals, films, agencies, clinics and schools which serve exceptional children.

This guide provides some direction for the student's reading and thinking and attempts to point up the important points and terms in each area.

The appendix contains a complete listing of all survey textbooks dealing with special education and exceptional children. For the reader who enjoys the insight of the novelist, we have included a special listing of works of fiction which relate to the gifted and different handicapping conditions.

Thanks is due to Daniel Kramon and to Patricia Snyder for their help in preparing this guide.

THE EXCEPTIONAL CHILD

Preface

The American parent is more interested in schools and the problems of children than at any time before in the history of America. This is perhaps because the American parent realizes that education has provided the royal road for success for most individuals during the past generation rather than social class, luck or family income. Parents are also concerned about their children realizing opportunities, actualizing potentials, and, in short, interested in their children becoming capable of what they can become. In a sense, the American Dream has included the idea that every parent hopes that his child will be a bit brighter, a bit happier, a bit more attractive and earn a bit more money during the course of his life than he, the parent has been able to. Unfortunately, this will not be the case for many children.

Approximately 10 - 15% of the population of American school children are labeled by educators as "exceptional"; exceptional children are those children who physicians, psychologists and educators have felt would benefit from special considerations, special services or a special curriculum in their daily school routine. Modern educational philosophy has emphasized the uniqueness of all children and has suggested that each child is atypical or exceptional in one or more ways.

The problem of exceptional children for parents and teachers is not new; however, today's parents and teachers are eager to face these problems with intelligence and compassion rather than by banishment and anxiety which were both common in the past. Throughout the centuries some consideration has been given to children who were noticeably different than their peers, yet not until very recent years have educators really focused their attention on the problems of this group. Since 1960, more federal funds have been allocated for research and educational and psychological services for the handicapped than in our entire history up to that year.

Experience and research in the related fields of psychology, medicine, sociology and rehabilitation have stressed the need for and importance of special services for exceptional children in our schools as well as creative and interesting methods in teaching them. Today, many lay persons recognize that the failure of society to properly provide for these youths in the schools often results in increased welfare loads, increased institutional populations, and unnecessary loss of man and womanpower.

Every community has exceptional children. It has been estimated that there are about five to seven million of such children in the United States.

This series of programs will explore in a creative way with interviews with the children themselves, experts in the field, classroom teachers of various types of children, film clips as well as interviews with parents, the problems faced by educators and parents in educating and rearing children who have significant differences.

Programs will be planned with the following criteria in mind: (1) competent and interesting exploration and expression in the language and understanding of the parent and teacher of an important view or trend in the education, rehabilitation and psychology of exceptional children and youth; (2) recent and innovative approaches in educating atypical children in the schools; (3) ways that parents can help children with learning problems at home: (4) the presentation of professionals and agencies and institutions where parents and teachers can turn who need further help. These agencies will be selected so that they represent typical community and educational services available for exceptional children throughout the United States.

TABLE OF CONTENTS

Forward i

Preface ii

Introduction to the Exceptional Person 5

An Overview of Special Education 7

Careers in Special Education 9

The Role of the School Psychologist with Exceptional Children 10

Prescriptive Teaching and Systems Engineering--Comprehensive Model for Teaching Exceptional Children 12

A District Program of Special Education 24

Critical Issues in Education of the Gifted 25

Program Considerations in Planning for the Gifted 27

The California State Program for the Gifted 29

Cross Cultural Considerations and Comparative Education of the Gifted 30

Review of Research Findings about the Gifted from Infancy to Adulthood 31

College and University Programs for Gifted Students 33

Elementary and Secondary Programs for Gifted Students 34

Love in the Classroom 36

Montessori Methods in Special Education 37

Overview of Children with Retarded Mental Development 39

Current Trends and Practices in Education of the Retarded Child 41

The Child with Down's Syndrome (Mongolism) 43

Phenylketonuria: A Metabolic Disorder Causing Mental Retardation 45

The Retarded Teenager and Young Adult 48

An Overview of Children with Neurological Handicaps 49

The Child and Youth with Cerebral Palsy 50

Understanding the Child and Youth with Epilepsy 52

Overview of Children and Youth with Orthopedic and Handicapping Medical Conditions 54

School Architectural Planning for Exceptional Children 57

Social and Emotional Development in Crippled Children 59

The Child with an Amputated Limb 60

Rehabilitation and the Schools 61

Educating Children in Hospital Settings 62

Organizations that Serve the Visually Handicapped 63

Causes of Blindness in School Age Children 64

Educating Blind Children 65

Integration of the Handicapped with Normal Children in Regular Public Education 67

The Psychology and Education of Children who are Partially Seeing 68

Color Blindness in Children: Its Educational and Vocational Aspects 70

Overview of Children with Communicative Disorders 71

Educating the Preschool Deaf 73

Severe Deafness in the Young Child 75

An Overview of Speech Development in Children 77

How to Help the Child with Minor Speech Defects 79

Stuttering: Its Causes and Treatments 81

Teaching and Understanding Children with Aphasia and Other Organic Communicative Handicaps 83

Children with Social-Emotional Problems 84

What is Childhood Autism? 91

Preschool Programs for Emotionally Disturbed Children 93

Delinquency and the School 94

The Child with a Specific Learning Deficit 96

Psychological Factors in Reading and Spelling Difficulties 98

Helping the Child who is a Poor Reader 100

The Disadvantaged Learner 102

Educating American Indian Children 127

Educating Children from Spanish-Speaking Homes 128

Instructional Materials and Instructional Technology in Special Education 129

Review of Course and Projection of Services for Exceptional Children into the Future 130

Appendix A: Standard Textbooks in the Area of Education and Psychology of Exceptional Children 131

Appendix B: Materials Useful to Parents in Understanding Exceptional Children 134

Appendix C: Glossary of Terms Relating to Exceptional Children 139

PROGRAM #1

INTRODUCTION TO THE EXCEPTIONAL PERSON

OVERVIEW:

The concept of exceptionality will be introduced by the presence and interviewing of four persons representing different levels and intensities of exceptionality.

CRITICAL VOCABULARY:

Exceptional:

Development
Maturational
Intelligence Quotient
Longitudinal research vs. cross sectional
Organismic age

Questions to consider during your readings and the telecast:

1. What is the distinction between and/or similarity between abnormality and exceptionality?
2. What is the basic concept of the exceptional child from (1) a historical view and (2) contemporary viewpoint?
3. What are the basic ways in which exceptional children are classified?
4. Give examples of what is meant by Kirk's statement that "special education begins where medicine stops."
5. How can special education aid the exceptional child?
6. How can the exceptional child's physical development affect his emotional development?

Required Reading:

Magary & Eichorn: Readings 1 and 2 (Newland and Cain)

Kirk: Chapter 1

Suggested Reading:

Telford and Sawyer: Part 1

Garrison and Force: Part 1

Trapp and Himelstein: Part 1, Section 1

PROGRAM #2

AN OVERVIEW OF SPECIAL EDUCATION

Program will present national incidence data as well as an overview of federal, state and local planning considerations.

CRITICAL VOCABULARY:

Psychometrist
Prevalence - incidence
Rehabilitation counselor
Itinerant teacher
Visiting teacher
Master teacher

Questions to consider during your readings and the telecast:

1. What are the general qualifications required to teach in special education?
2. Other than the public school, what other settings could be used in the education of exceptional children?
3. Other than the teacher, what other pupil personnel and professional people would be concerned with the exceptional child?
4. What types of programs are provided under the department of special education?
5. What is special education and define its function.
6. With a limited budget, list in order of preference those children who should receive the benefits of special education.

Required Reading:

Kirk: Chapter 14

Suggested Reading:

Garrison and Force: Part I, Chapter 2

Seigel, Ernest - All

PROGRAM #3

CAREERS IN SPECIAL EDUCATION

OVERVIEW:

Discussion with a Director of an Instructional Materials Center of Special Education, a former director of Special Education, a school nurse, a social worker and a school psychologist regarding their respective occupational spheres of work with exceptional children.

CRITICAL VOCABULARY:

Multidisciplinary approach
Psychologist
Clinical teaching
Instructional materials
Occupational therapy
Physical therapy
Special education aide
Special education technician

Questions to consider during your readings and the telecast:

1. What new vocations and professions are appearing on the special education scene?
2. What are some positions working with exceptional children which require only high school? Junior college? Bachelor's degree? Masters and doctors?
3. Visit your nearest instructional materials center (2120 West 8th Street in Los Angeles- 380-1230). What type of services are provided by this agency?

Required Reading:

None

Suggested Reading:

None

PROGRAM #4

THE ROLE OF THE SCHOOL PSYCHOLOGIST WITH EXCEPTIONAL CHILDREN

OVERVIEW:

A school psychologist is an applied behavioral scientist in the schools. His duties include assessment, remediation, consultation and research with exceptional children.

CRITICAL VOCABULARY:

Developmental quotient
Educationally handicapped
Projective technique
Perceptual - motor quotient
Wechsler
ITPA
Physically handicapped
Mentally retarded
Diagnostic prescriptions

Questions to consider during your readings and the telecast:

1. What is the primary role of the school psychologist?
2. What should a psychological assessment include?
3. Should the school psychologist be concerned with problems that are not of an academic nature, and if so, to what extent?
4. In what other ways than testing can the school psychologist function?
5. What is the difference between the psychologist, the counselor and the social worker?

Required Reading:

Magary and Eichorn: Reading #4

Suggested Reading:

Cruickshank: Chapter 2

Magary: School Psychological Services, In Theory and Practice, A. Handbook. Prentice-Hall 1967.

Gray, Susan W.: The Psychologist in the Schools, New York: Holt, Rinehart & Winston, Inc., 1963.

PROGRAM #5

PRESCRIPTIVE TEACHING AND SYSTEMS ENGINEERING-COMPREHENSIVE MODEL FOR TEACHING EXCEPTIONAL CHILDREN

Guest: Dr. Laurence J. Peter, Professor of Special Education, USC

OVERVIEW:

The Prescriptive teaching sequence is designed to develop the professional abilities necessary to teach emotionally disturbed children and remediate behavior and learning problems. The training procedures are based upon systems analysis, simulation, and instructional technology which have proven successful in developing complex skills in medicine and business management. Prescriptive teaching is a model for integrating and translating diagnostic findings into teaching methods. This method utilizes diagnostic information from many sources and employs this information in the utilization of a wide variety of educational techniques in the solution of the child's difficulty.

CRITICAL VOCABULARY:

Elicitors
Behaviors
Reinforcements
Enroute Objectives
Self-reinforcement
Consistent Approach

Questions to consider during your readings and the telecast:

1. Make a visit to the Evelyn Frieden Clinic at the USC School of Education and describe the type of teaching method you observe.

2. How would you contrast the Peter approach with traditional educational approaches?

Required Reading:

Reading by Dr. Peter: Pages 16-23 in this guide.

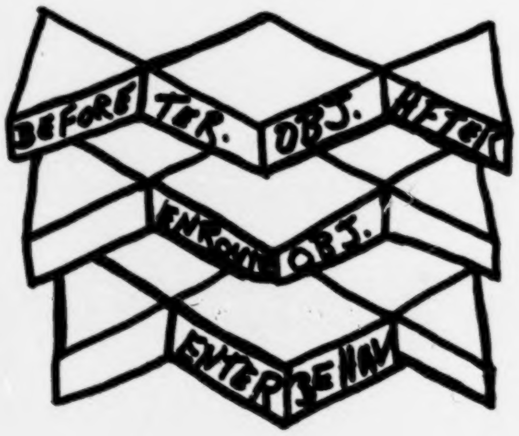
Suggested Reading:

Peter, Laurence J.: *Prescriptive Teaching*, New York: McGraw-Hill Book Co., 1965.

PRESCRIPTIVE TEACHING PROGRAM:

Using what is known about child psychological development, a teacher is responsible for arranging stimulus events to elicit progressive changes in behavior and for providing reinforcing events to strengthen these changes. Prescriptive Teaching is the educational program which provides the teacher with the means to successfully carry out this responsibility. The program consists of three phases:

(1) Individual instruction - therapeutic teaching
(2) Classroom methods
(3) Interdisciplinary practices



MODEL

The model conceptualizes the components of a Prescriptive Teaching Program

ELICITOR
an event which immediately precedes and brings forth a behavior

BEHAVIOR
a measurable and observable activity of the child

REINFORCER
occurs after a behavior and influences future behavior

DEFINITIONS

Behavioral Analysis is the scientific study of behavior through direct observation or measurement. A behavior analyst avoids inferrence and produces an objective diagnosis of the child's problem and impirical data about progress and outcome of treatment.

Entering Behavior consists of a description of the child's functioning at the time of entering the program. This description is the result of study of the referral, observation of the child in the classroom, and diagnostic teaching.

Terminal Objective is a description of the projected behavior of the child at the termination of the program or end of the course.

Enroute Objective is any objective on the way from the entering behavior to the terminal objective.

Para-educational Information consists of medical, psychological, and social information accompanying the referrals.

Prescriptive Teaching: An Integrating Concept

LAURENCE J. PETER

Definition

The word "prescribe" means literally to "write beforehand" or to "set down the direction." If teaching is based upon sound learning principles, then these principles prescribe teaching. In this context, teaching includes those school functions which facilitate learning, the most important of which is instruction in the classroom. It deals primarily with the means for achievement of sound educational goals for educationally handicapped children.

Origin

The rationale and methodology described in Prescriptive Teaching (Peter 1965) developed as a result of my experiences in working with handicapped children, first as a teacher and later as a school psychologist. It was in the latter role that I was continually confronted with the problems of communicating diagnostic findings so that appropriate implementation could take place.

A methodology emerged which assists educators and consultants in solving the dilemma of assimilating and applying information pertaining to the exceptional child. It provides them with a systematic approach to link medical, psychological, and social diagnoses, thus helping them to translate the different diagnoses into reasonable therapeutic terms applicable to the classroom.

A child can be referred by the school to a variety of diagnostic and treatment resources, such as psychologists, counselors, child guidance clinics, and social agencies. The diagnostic information received from these resources is frequently not relevant to the problem of teaching the child. This situation results in considerable frustration on the part of the diagnosticians when they see their diagnosis apparently being ignored. The teacher is frustrated because the help expected from the diagnosticians was not forthcoming.

Prescriptive Teaching provides a solution by establishing what is educationally relevant in terms of the handicapping consequences to the child's learning. It then translates this to the teacher and others responsible for action. The specific elements of the educational program are thus related to the diagnosis. Prescriptive Teaching assembles diagnostic information in a manner that facilitates appropriate teaching, making a significant contribution to improvement of the education of disturbed or disabled children.

Recently, educators and the public have exhibited a keen interest in learning disabilities in children. This interest has been aroused mainly by a new emphasis on perceptual problems in children, generally, and on compensatory education for culturally deprived children. Prescriptive Teaching results in more careful educational diagnosis and specific treatment for these educational problems.

Psychologists have traditionally pursued the study of verbal learning by means of experiments with nonsense syllables and other materials carefully divested of meaningful information. The problem the educator must face is how to determine what is relevant to the classroom. Added to this is the complex information which results from the interdisciplinary team approach to diagnosis.

Through Prescriptive Teaching, a model for integrating and translating diagnostic findings into teaching is provided. This model utilizes diagnostic information from many sources and employs the information in the utilization of a wide variety of educational techniques in the solution of the child's difficulty. This is particularly important in teaching moderately disturbed, learning disabled, or multiple handicapped children where a number of educational variables must be modified. The model in no way limits the availability of techniques but rather facilitates the use of appropriate educational modifications.

The Prescriptive Teaching program is based on a communication circuit, and the plan of my book is organized around this circuit, starting with the child in the classroom and progressing through the stages of referral, diagnosis, treatment and evaluation of outcomes. This provides for systematic study of the elements within our area of educational responsibility.

Educational Responsibility

The most remarkable feat of learning any human undertakes—learning to speak his native tongue—is accomplished, in the main, without formal instruction. The vast majority of children, in a normal environment, will develop the competencies needed to survive in that environment. Some children have learned to read and write with little or no formal instruction, and many have learned from parents or from other children who have had no professional teacher training. Much of the child's learning is incidental. The stimulus events in the environment elicit a constantly expanding repertoire of responses as the child's capacity for responses increase through growth. This maturational process results in a continually new production of interactions with the environment. These interactions are strengthened or weakened by environmental consequences. This natural or informal process—the child's developing capacities for response, the eliciting events in the environment, the child's resultant increase in behavioral responses, and the shaping of these behaviors by their consequence—results in appropriate incidental learning.

Because of the nature of the growing organism and the major role of incidental learning in the total education of the child, educators have been allowed to deal in generalities about the processes of education. Because most children will learn quite well by almost any method, or in spite of any method, general educators have been spared the necessity of studying the process of instruction in a scientific or systematic way. This has permitted us to be vague and to deal in general terms about understanding the child.

The Interdisciplinary Team

When a child does not respond favorably to the educational milieu, educators have turned to other professions for attempts at help. Studying the whole child by employment of an interdisciplinary team is now generally accepted as the ideal in diagnosis. In terms of uncovering physical, mental, social and emotional pathology, this method is effective and some children probably benefit through mental health consultation, medication, or family counseling. But many children who are educationally handicapped are not neurologically impaired, nor do they come from pathological home environments. Of those children who do come from disturbing homes and who are classified as emotionally disturbed, many do not benefit substantially through mental health consultation. Some or perhaps most parents do not accept the recommendation for referral to mental health services. Of those that do, some drop-out early, and of those that persevere, only a fraction are able to modify sufficiently in time to be of significant help in alleviating the child's learning difficulties. This is not a suggestion for reduction of interdisciplinary efforts for much can be gained through this approach. Whatever the findings of the diagnostic team, it usually remains the educator's responsibility to determine the educational therapeutic procedures.

Limitations of Present Knowledge

The classroom has not as yet been subjected to the kind of research which determines all the components of good teaching. Scientific investigations of teaching have been faced with the dual problem of the complexity of teaching and their inability to control factors outside of the classroom. Statistical methods have attempted to control these variables by sheer numbers. Laboratory methods have traditionally isolated or abstracted simple elements from crude experience and pursued the study of learning material carefully divested of meaningful information. Scientific investigations have had to face the problem of the complicated and untidy nature of classroom experience. Both laboratory and statistical methods of studying the teaching-learning situation deal in abstraction or simplification and are therefore in danger of missing significant factors.

This danger of course exists in all scientific efforts. A classic illustration is Liebig's discovery of the functions of carbohydrates, fats, and proteins. In his study of nutrition these elements were isolated from the untidy complexity of our common everyday food. He did not realize that very significant elements had been ignored. In consequence, dieticians for many years concluded that fresh fruit and vegetables were only a luxury and that salads were merely a garnish adding a pleasant but unnecessary frill to our eating habits. Important as Liebig's discovery was, it did not focus attention on the totality or complexity of an adequate diet.

Our present knowledge of teaching is somewhat parallel. Some elements which apparently contribute to effective teaching have been isolated and studied, but when attempts have been made to teach by these elements singly, the results have been disappointing. Prescriptive Teaching attempts to incorporate some of these known elements, but does not presume to prescribe the totality of how to teach.

Teaching, like most professions, is a combination of art and science. Teaching, like the practice of medicine, is very much an art. It calls for the exercise of talent and creativity. But like medicine, it is also—or should be—a science, for it involves a repertoire of techniques, procedures and skills that can be systematically studied and described, and therefore transmitted and improved. The effective teacher, like the competent doctor, is the one who adds creativity and inspiration to that basic repertoire.

Rationale

Education is concerned with that part of adaptive behavior which comes under the influence of teaching. Prescriptive Teaching helps us base our curriculum on what we know about child development. The child's psychological development is made up of progressive changes in the different ways of interacting with environment. It is the teacher's responsibility to arrange stimulus events which will elicit these changes and reinforcing events which strengthen these changes. These stimulus events and reinforcing events are the specifics of our technology. Prescriptive Teaching by providing a model for determining educational specifics brings our instructional technology under systematic study.

The school's influence on the child's learning is limited to the events before behavior occurs and to events after. In psychological terms, these are referred to as stimulus events and reinforcement events. If these events are arranged so as to elicit progressive change in the motor, perceptual, social, and cognitive development, and to allow reinforcing events to become attached to these changes, learning is at an optimum. The Prescriptive Teaching model relates ten educational variables to the diagnostic information so as to provide an educational mileiu where these before-and-after events are integrated to elicit and reinforce learning.

School Variables

The school variables we have used in the model are based upon our research in communication (Peter, 1963). These variables are appropriate to the school situation although they appear to differ from the elements studied in laboratory experiments or those employed in psychotherapeutic models. These are the ten school variables employed in the Prescriptive Teaching model.

(a) Consistent Approach

An approach is a way of coming toward or reaching a person. Although Prescriptive Teaching is a program based on individual diagnosis there are groups of children whose needs are met by the same approach. Almost any consistent structure is more conducive to growth and confidence then no framework or a vague and fluctuating one. Without a consistent approach, there is high probability that we will reinforce the very behaviors we are trying to eliminate.

(b) Teaching Methods

The diagnosis of the child's educational achievements and of his processing modes of learning can indicate the method of perceptual training, reading instruction, physical education, etc., which would be effective.

(c) Specific Objectives

The expected specific behavioral changes should be stated so that stimuli and reinforcement can shape appropriate learning and so that outcomes can be evaluated.

(d) Ancillary Services

School services provided by psychologists, counselors, speech therapists, visiting teachers and other consultants are deployed so as to facilitate the learning process.

(e) Placement and Personnel

All aspects of school placement are considered. Grade placement, regular or special class, integration and the type of teacher are determined in relation to the educational significance of the disability.

(f) Subject Matter

Content is selected in order to use the child's area of strength and interest to develop competence in overcoming areas of weakness.

(g) Instructional Materials

Consumable supplies can be appropriately selected for this process. For example, children with motor problems may be aided through writing on large sheets of paper and by using large crayons and pencils.

(h) Special Equipment

Special teaching aids, educational toys, teaching machines, reading kits and other equipment can be appropriately prescribed.

(i) School Plant

The classroom or the school building should be appropriate to the specific educational goals. For example, the classroom can provide abundant or little stimulation to the child. This may be crucial to the learning of a hyperactive child.

(j) Auxiliary Agencies

Child guidance clinics, family service agencies, juvenile authorities, medical, and other services dealing with the school child are involved in a coordinated manner, so as to encourage and maintain continuing two-way communication. This is necessary in delineating areas of responsibility and competence.

Toward a Science of Teaching

Traditionally, many teachers have intuitively selected the appropriate modification for children with problems. Without a rationale such as provided by Prescriptive Teaching, we must rely on intuition. Valuable though intuition is, we must also develop a science of teaching. A profession cannot be developed adequately on a basis of methodology which cannot be systematically studied and communicated.

The elements of Prescriptive Teaching are not new. It is a rationale and methodology for establishing a more effective integration and implementation for established and scientifically tested techniques. The outcomes of implementation of Prescriptive Teaching can be described in three ways: individual results, program improvement and professional development.

(1) Individual Results

Follow-up studies indicated significant improvement for the child when this integrated approach was employed. Teachers accepted Prescriptive Teaching as an improvement over preceding methods of organizing educational services for the child. It was generally regarded as a practical, effective approach to use within the public school system. It used existing personnel and required the development of basically one skill, the translation of medical, psychological, social, and educational diagnoses into educational prescriptions. Although it provided an improved method of mobilization of services for the exceptional child, its most important contribution was to a much larger group of less severly handicapped children who are retained in regular classes.

(2) Program Improvement

Program improvement resulted in more meaningful educational classification of exceptional children. As a result of the emphasis on specificity and educational relevance, segregation of children into special classes and integration with regular classes was based upon situationally significant educational criteria. In this way, Prescriptive Teaching has become part of a trend toward more meaningful educational programs. Traditionally, we have used medical or psychological classifications, such as, emotional disturbance or mental retardation. Recently, we have seen some educational classifications, such as, learning disorders, and educational handicaps. Prescriptive Teaching is part of this trend toward educational relevance.

(3) Professional Development

Prescriptive Teaching achieves therapeutic results through educational means and supports development of teacher competencies within the educational system. It establishes a rationale for teacher behaviors on the basis of our best contemporary knowledge of the teaching-learning process. It facilitates the incorporation of new materials and techniques and provides the kind of feedback and ongoing evaluation that keeps the educational program in dynamic balance, while positively reinforcing the effective teacher behaviors.

It can contribute to individual teacher growth and to the professions moving toward greater status. Special education has, to a degree, relied on borrowed status. The children in our care have been of particular concern to the professions of medicine and psychology. Teachers have been described by social psychologists as being high on deference and low on autonomy. Part of this may be a result of the lack of a substantial rationale for teacher behaviors. Lacking a cohesive structure they are particularly vulnerable to deriving status through association with prestigious professions.

The Prescriptive Teaching model provides a rationale for dealing more meaningfully with many of the specific within our area of responsibility. I offer this model to my profession as one contribution to the integration of our present knowledge about the teaching-learning process. It provides a rationale for the educational relevance of disabilities and facilitates more appropriate educational modification. It is through this process that we can establish a realistic model of the processes of teaching and learning, and thus, a sound structure for our profession.

Teaching is the most important profession and presently has a great number of intelligent, dedicated professionals in its ranks. It can emerge as a truly great profession.

Peter, Laurence J. "An Evaluation of the Written Psychological Report in an Elementary School Guidance Program" unpublished doctoral dissertation, Pullman, Wash: Washington State University 1963.
Peter, Laurence J. *Prescriptive Teaching,* New York: McGraw-Hill Book Co. 1965.

PROGRAM #6

A DISTRICT PROGRAM OF SPECIAL EDUCATION

Guests: Robert W. Gartin and Walter Retzlaff

OVERVIEW:

This program will give the viewer a comprehensive picture of special education services from K - 12 in one school district.

CRITICAL VOCABULARY:

ADA
Unified School District
Itinerant
Resource room
Title III of ESEA
Title VI of ESEA

Questions to consider during your readings and the telecast:

1. How are pregnant high school girls helped?
2. What are some of the problems facing an administration of special education?
3. How do school districts work together in serving exceptional children?

Required Reading:

Kirk: Chapter 14

PROGRAM #7

CRITICAL ISSUES IN EDUCATION OF THE GIFTED

OVERVIEW:

Major issues in education of the gifted include the nature and definition of giftedness, early identification of the gifted child and methods of facilitating academic achievement through appropriate educational and guidance programs.

CRITICAL VOCABULARY:

Ability
Intelligence
Gifted
Talent
Lewis Terman

Questions to consider during your readings and the telecast:

1. How do different definitions of giftedness effect the identification and selection of the gifted student?
2. What are the advantages and disadvantages of using intelligence tests for identifying gifted children?
3. What role does the teacher play in identifying the gifted child? What criterion can the teacher use in this process?
4. What role does guidance and counseling play in assisting the gifted student?
5. What methods are available for identifying the gifted child? What are the limitations of each?
6. What are the characteristics of gifted children?

Required Reading:

Magary and Eichorn: Readings 65, 66, 67

Kirk: Pages 35-60

Suggested Reading:

Freehill, Maurice F.: *Gifted Children*, The Macmillan Company, 1963.

French, Joseph: *Educating the Gifted*, New York, Holt, Rinehart and Winston, Inc., 1964.

Journal: *The Gifted Child Quarterly*, Published by National Association of Gifted Children.

Thomas, George I., and Crescimbeni, Joseph: *Guiding the Gifted Child*, Random House, 1966.

Torrance, Paul E.: *Gifted Children in the Classroom*, The Macmillan Company, 1965.

Fiction Related to the Gifted:

Charyn, Jerome: *Going to Jerusalem*, The Viking Press, New York, 1969.

Hesse, Hermann: *Beneath the Wheel*, translated from the German by Michael Roloff, Farra, Straus, Giroux, New York, 1968.

Huxley, Aldous: *The Genius and Goddess*, Harper and Row, New York, 1955.

Mann, Thomas: *The Beloved Returns*, translated from the German by H. T. Lowe-Porter, Alfred A. Knopf, New York, 1940.

PROGRAM #8

PROGRAM CONSIDERATIONS IN PLANNING FOR THE GIFTED

OVERVIEW:

Specification of objectives and basic approaches represents the initial step in program development for the gifted. Considerations of resources available, anticipated number of gifted students, procedures for identification and methods of instruction must be balanced against providing an individualized program for the gifted student.

CRITICAL VOCABULARY:

Educational objectives
Enrichment
Acceleration

Questions to consider during your readings and the telecast:

1. What kind of grading and evaluating system is appropriate for gifted children?
2. How can enrichment be utilized in the regular classroom?
3. What are the advantages and disadvantages of special groupings?
4. What are some of the basic problems facing a school which is planning a program for gifted students?
5. Evaluate programs of accelerating gifted students.

Required Reading:

Magary and Eichorn: Readings 68, 69, 70

Kirk: Pages 60-81

Suggested Reading:

Fliegler, Louis: *Curriculum Planning for the Gifted*, New Jersey, Prentice-Hall, Inc., 1961.

PROGRAM #9

THE CALIFORNIA STATE PROGRAM FOR THE GIFTED

Guest: Mr. Irving Sato, Consultant on Programs for
Mentally Gifted Minors, California State
Department of Education
Jeanne Delp, Garden Grove Schools
Miss Sandra Kaplan, Inglewood Schools

OVERVIEW:

A discussion of various ways gifted children are served in this state as well as programmatic and evalutation criteria. Kinds of levels of programming as well as financial and administrative considerations will be discussed.

CRITICAL VOCABULARY:

Guilford - Content; Operations; Products
Operations - cognition, memory, convergent thinking and evaluation
Inquiry training
Suchman

Questions to consider during your readings and the telecast:

1. How are children who are gifted assisted by the State Department of Education?
2. What criteria have to be met before a child can be termed a mentally gifted minor in California?
3. How do the various programs for the gifted children differ?

Required Reading:

Kirk: Chapter 2

PROGRAM #10

CROSS CULTURAL CONSIDERATIONS AND COMPARATIVE EDUCATION OF THE GIFTED

Guests will include experts from various parts of the world. Dr. David Brokensha, Chairman of Anthropology University of California, Santa Barbara (South Africa) Dr. Bernard Riley - Geography, Great Britain

CRITICAL VOCABULARY:

Secondary Modern School (British)
Lycee (France)
Gymnasium (German)
Scandinavian Folk School
USSR Pioneer Palace

Questions to consider during your readings and the telecast:

1. How does the American pattern of serving the Gifted vary from those presented on this program?
2. Why does American education maintain an "open corridor" to education at all levels of education?
3. How do primitive societies choose their more able members to be leaders?

Required Reading:

None

Suggested Reading:

King, Edmund: Other Schools and Ours, Holt, Rinehart and Winston.

PROGRAM #11

REVIEW OF RESEARCH FINDINGS ABOUT THE GIFTED FROM INFANCY TO ADULTHOOD

OVERVIEW:

The monumental longitudinal research on gifted children by Lewis Terman refuted the myths that gifted children are physically, socially, and emotionally inferior and opened areas for further research. The discussion will cover research concerning the growth and development of characteristics of the gifted.

CRITICAL VOCABULARY:

Trait Ratings
Longitudinal Research
Cross-sectional Research
Socioeconomic Status

Questions to consider during your readings and the telecast:

1. What does the research indicate about the development of peer relationships of the gifted?
2. How do motivational and attitudinal factors of the gifted differ from other students?
3. How does socioeconomic status affect membership among the gifted?
4. What are the general social and personal characteristics of the gifted?

Required Reading:

Magary and Eichorn: Reading #71

Suggested Reading:

Goertzel, Victor and Goertzel, Mildred: Cradles of Eminence, Boston, Little, Brown, 1962.

Lehman, H. C.: Age and Achievement, Princeton University Press, 1953.

Getzels, Jacob and Jackson, Philip: Creativity and Intelligence, New York, Wiley, 1962.

PROGRAM #12

COLLEGE AND UNIVERSITY PROGRAMS FOR GIFTED STUDENTS

Guests: Dr. Mary Lou Jordan
Dr. Thomas Lasswell
USC Special Honors Program Students

OVERVIEW:

Recent innovations in colleges and universities have been aimed at acceleration of studies and enrichment of educational experience of the gifted student. Programs for individual study, admission with advanced standing, interdisciplinary study, and honors curriculum represent special approaches developed for the gifted student.

CRITICAL VOCABULARY:

Early admissions
Advanced Placement Program

Questions to consider during your readings and the telecast:

1. What are the implications of the Advanced Placement Program for the gifted student's educational program?
2. Evaluate the effects of an honors program at the college or university level.
3. What are the values of independent study at the college or university level?

Suggested Reading:

Cohen, Joseph: The Superior Student in American Higher Education, New York, McGraw Hill, 1966.

PROGRAM #13

ELEMENTARY AND SECONDARY PROGRAMS FOR GIFTED STUDENTS

OVERVIEW:

Programs for the mentally superior student at the elementary and secondary levels have included acceleration, enrichment, and special groupings. More recently, curriculum revisions emphasizing a problem solving approach and the structure of a field have been developed to allow the gifted student to pursue topics in depth and to explore the methods of the particular fields.

CRITICAL VOCABULARY:

Ability Groupings
Special Classes
Creativity
Convergent Thinking
Divergent Thinking
Individualized Program
Acceleration
Dr. James B. Conant
Underachievers

Questions to consider during your readings and the telecast:

1. How can the underachieving gifted child be identified? What steps can be taken within the school to assist the underachiever?

2. What is enrichment? What are the limitations of enrichment programs?

3. What effects, if any, do acceleration programs have on the gifted student's social and emotional development according to available research?

4. What are the effects of an inadequate educational program?

Required Reading:

Magary and Eichorn: Readings 68, 69, 70, 71

Kirk: Pages 60-75

Suggested Reading:

Gallagher, James: Teaching the Gifted Child, Boston, Allyn and Bacon, 1964.

PROGRAM #14

LOVE IN THE CLASSROOM

Guest: Dr. Leo F. Buscaglia, Associate Professor
of Special Education, USC

OVERVIEW:

With all the current behavioral methodology being applied to the classroom, it is imperative that love as a means for facilitating learning and human interaction be considered. Perhaps more consideration should be given to Plato who considered a great teacher to be, among other things, one who gave love to his students.

CRITICAL VOCABULARY:

Love (as reinforcement)

Questions to consider during your readings and the telecast:

1. In what ways can human warmth serve as a reinforcer?
2. Does love have a purpose in the goal of over-all education?
3. When we speak of love in the classroom, what factors are involved?

Required Reading:

None

Suggested Reading:

Hesse, Hermann: Siddhartha (available in paperback)

May, Rollo: Love and Will

Fromm, Eric: The Art of Loving (available in paperback)

PROGRAM #15

MONTESSORI METHODS IN SPECIAL EDUCATION

Guests from Santa Monica Montessori School
Mrs. Ruth Dresser, Director

OVERVIEW:

Montessori is a method of education which uses concrete objects to teach abstract ideas and concepts. This method was first formulated through exploration by Maria Montessori in 1907 in which she devised these didactic materials to teach retarded, culturally deprived, and brain injured children.

CRITICAL VOCABULARY:

Normalized Children (stable)
Horme - natural impulse to learn
Visual perception
Visual acuity
Motor coordination

Questions to consider during your readings and the telecast:

1. How do Montessori methods differ from other educational methods?
2. Why are Montessori methods and ideas being rediscovered?
3. How can a teacher use these methods in conjunction with other procedures?

Suggested Reading:

Orem, R. C. Ed.: A Montessori Handbook "Dr. Montessori's Own Handbook," G. P. Putnam's Sons, 1965.

Standing, E.M.: Maria Montessori - Her Life and Work, Mentor-Omega Book - New American Library, 1962.

Suggested Reading (cont'd):

Standing, E. M.: Montessori Method: A Revolution in Education, Mentor, 1962.

PROGRAM #16

OVERVIEW OF CHILDREN WITH RETARDED MENTAL DEVELOPMENT

Mental retardation refers to subaverage general intellectual functioning which originates during the developmental period and is associated with impairment in maturation, learning, and/or social adjustment. All of these factors will be discussed with emphasis on learning.

CRITICAL VOCABULARY:

MA
CA
IQ

Idiot
Imbecile
Moron

Perinatal
Postnatal
Organic

Questions to consider during your readings and the telecast:

1. How can the mentally retarded child be identified?
2. How is language development related to retarded mental development?
3. What types of teaching and therapeutic methods are most conducive to assist the mentally retarded child to reach full potential?
4. What are the causes of mental retardation?
5. What is the prevalence of mental retardation in the U.S.?

Required Reading:

Magary and Eichorn: Readings 7, 10, 11

Suggested Reading:

Garrison and Force: Chapter 3

Jordan: Chapter 6

Suggested Reading (cont'd):

Cruickshank: Chapter 9

Jordan, Thomas E.: The Mentally Retarded, Charles E. Merrill Books, Inc., 1961.

Kephart, Newell C.: The Slow Learner in the Classroom, Charles E. Merrill Publishing Co., 1960.

Masland, Richard L., Sarason, Seymour B., Gladwin, Thomas: Mental Subnormality, Basic Books, 1958.

Smith, Robert M.: Clinical Teaching: Methods of Instruction for the Retarded, McGraw-Hill, 1968.

Fiction Related to the Mentally Retarded:

Erno, Richard B.: The Catwalk, Crown Publishers, New York, 1965.

Haugen, Pearl Montgomery: Those Who Keep the Vigil, Exposition Press, New York, 1963.

Hutchinson, R. C.: A Child Possessed, Harper & Row, New York, 1964.

Keyes, Daniel: Flowers for Algeron, Harcourt, Brace & World, New York, 1966.

Lofts, Narah: Scent of Cloves, Doubleday & Co., New York, 1960.

Spencer, Elizabeth: The Light in the Piazza, McGraw-Hill, New York, 1960.

Steele, Max: Debby, Harper & Row, New York, 1950.

Welty, Eudora: The Ponder Heart, Harcourt, Brace & World, New York, 1954.

Wolff, Ruth: A Crack in the Sidewalk, The John Day Co., New York, 1965. (Y)

PROGRAM #17

CURRENT TRENDS AND PRACTICES IN EDUCATION OF THE RETARDED CHILD

OVERVIEW:

There is considerable controversy as well as different underlying premises regarding the best way of educating the retarded which will be discussed.

CRITICAL VOCABULARY:

EMR
IMR
Segregated classroom
Pre-school class
Primary class
Intermediate class
Secondary class
Sequin
Montessori
ITARD

Questions to consider during your readings and the telecast:

1. What are some of the problems encountered in deciding what type of class a certain mentally retarded child should be placed in?
2. What are some of the physical and intellectual characteristics of the mentally retarded child?
3. What are the determining factors in arriving at realistic objectives of educating the mentally retarded child?
4. What is the teacher's role in the education of the mentally retarded child?

Required Reading:

Kirk: Chapter 4

Magary and Eichorn: Reading 12

Suggested Reading:

Robinson and Robinson

PROGRAM #18

THE CHILD WITH DOWN'S SYNDROME (Mongolism)

OVERVIEW:

Down's Syndrome constitutes the largest single grouping of the trainable mentally retarded (TMR) and they are about a fourth to a third of the students in the classes for the TMR. Approximately 1 in every 600 to 900 live babies has this condition. More than fifty physical signs have been listed as characteristics of mongolism. The significant diagnostic signs have been reduced to thirteen among which are: (1) a flattened skull (2) abnormally upturned nostrils (3) abnormal toe spacing (4) shortness of a fifth finger with no creases and turns inward.

In 1959, the cause of mongolism was demonstrated to involve a chromosomal abnormality. Since then three types of chromosomal deviations have been identified: (1) trisomy (2) translocation (3) mosaicism.

CRITICAL VOCABULARY:

Chromosome
Aberration
Anomaly
Simian crease

Questions to consider during your readings and the telecast:

1. How should children with Down's Syndrome be educated?
2. Discuss the relationship between Down's Syndrome, age of mother and social class.

3. What is known about the personality of Down's Syndrome children?

Required Reading:

None

PROGRAM #19

PHENYLKETONURIA: A METABOLIC DISORDER CAUSING MENTAL RETARDATION

Panel Guests: Dr. James Dobson, Director of Behavioral Research, Division of Child Development, Children's Hospital, Los Angeles.
Dr. Mike Williamson, Chief of Biostatistics and Research Design, Division of Child Development, Children's Hospital, Los Angeles.
Mr. Raleigh Philp, Assistant Project Director, PKU Collaborative Study, Children's Hospital, Los Angeles

OVERVIEW:

Phenylketonuria, better known as PKU, is a relatively rare disorder (one in 15,000 live births), that is thought to be transmitted by a simple Mendelian recessive factor. PKU generates from an inborn error of metabolism that results from either the absence or inactivity of the liver enzyme, phenylalanine hydroxoylase, which normally converts phenylalanine to tyrosine. Individuals having this disorder accumulate large quantities of phenylalanine in body tissues as the result of eating protein foods, all of which normally contain the essential amino acid, phenylalanine. In absence of treatment, mental retardation is the usual result of this phenylalanine accumulation.

Although the specific neural mechanism that causes mental retardation is not fully understood, the disorder may be diagnosed from a few days after birth and treated by restricting the child to a low phenylalanine diet. The apparent results of this special diet have been dramatic in preventing mental retardation in some cases of PKU; however, the rare occurrence of the disorder has prevented clinicians from studying adequate numbers of patients to prove this hypothesis. The Collaborative Study of Children Treated for Phenylketonuria is an ambitious nationwide project which will hopefully provide some of the answers regarding the value of the diet in preventing mental retardation in children suffering from PKU.

CRITICAL VOCABULARY:

Phenylalanine
Tyrosine
Metabolic pathway
Metabolic block
Chromosome
Gene

Autosomal
Recessive/dominant
Lofenalac
Mental retardation
Protein

Questions to consider during your readings and the telecast:

1. What happens to children who are not treated for the disorder?
2. How can a special diet specifically help the child?
3. How are children detected as having this disorder?
4. Why is a nationwide study needed to determine the efficacy of a low phenylalanine diet for children suffering from the disorder?
5. What is atypical phenylketonuria?
6. Is there any correlation between the age of detection and the severity of mental retardation?

Required Reading:

None--Please take careful notes on the presentation.

Suggested Reading:

Robinson and Robinson: The Mentally Retarded Child, pp. 109-112

PROGRAM #20

THE RETARDED TEENAGER AND YOUNG ADULT

OVERVIEW:

Educational objectives for the retarded teenager and young adult are focused on preparing the person for life and work in the community. Training of a vocational nature and the development of social skills are emphasized during the high school program. Sheltered workshops provide training and work for young adults unable to find employment in the community.

CRITICAL VOCABULARY:

Sheltered Workshop
Work-Study Program
Vocational Rehabilitation

Questions to consider during your readings and the telecast:

1. What functions does the shelter workshop perform?
2. What special social and emotional problems does the retarded teenager and young adult face?
3. Discuss the aims of the secondary and post-school educational programs for the mentally retarded teenager and young adult.
4. How can counseling assist the mentally retarded teenager and young adult?

Required Reading:

Magary and Eichorn: Readings 15, 16

PROGRAM #21

AN OVERVIEW OF CHILDREN WITH NEUROLOGICAL HANDICAPS

OVERVIEW:

Neurological handicaps refers to perceptual, learning, thinking and personality disturbances connected with brain injury. Brain damage may be considered a cause or an effect and may occur prenatally, paranatally, or postnatally.

CRITICAL VOCABULARY:

Strauss Syndrome
Encephalitis
Neurophrenia
Dyskinesia
DNS Impairment
Exogenous mental deficiency

Questions to consider during your readings and the telecast:

1. What are the behavioral and personal characteristics of children with neurological handicaps?

2. Discuss the special educational problems of children with neurological handicaps.

3. How has the term "brain injured" been used? What are the weaknesses of the term?

Required Reading:

Magary and Eichorn: Readings 17, 18, 19

PROGRAM #22

THE CHILD AND YOUTH WITH CEREBRAL PALSY

OVERVIEW:

Cerebral palsy is not a disease but a condition characterized by a group of concurrent symptoms. The condition takes different forms with different neuromotor disabilities. The CP child, thus, is almost always a multi-handicapped child with associated handicaps. Types of cerebral palsy which are frequently differentiated are (1) spastic paralysis, (2) athetosis, (3) ataxia, (4) tremor and (5) rigidity. Discussion will concern itself with CP children and youth, their psychology, education and habilitation.

CRITICAL VOCABULARY:

Dr. Little
Dr. Phelps
Monoplegia
Hemiplegia
Paraplegia
Quadriplegia
Prenatal, perinatal and postnatal

Questions to consider during your readings and the telecast:

1. Which professions should work on an interdisciplinary team in planning programs for the cerebral palsied?
2. In a population of 1000 cerebral palsied children, how many of them would be mentally retarded? How many speech defectives? How many with vision problems, hearing problems?
3. Discuss the problems of adolescents and young adults with cerebral palsy.

Required Reading:

Magary and Eichorn: Reading #20

Kirk: Chapter 10

Fiction Related to Cerebral Palsy:

Berg, Margaret Arbore: *Wednesday's Child*, Fortress Press, Philadelphia, 1960.

Dornfeld, Iris: *Jeeney Ray*, The Viking Press, New York, 1962.

Kantor, MacKinley: *Glory For Me*, Coward-McCann, New York, 1945.

Little, Jean: *Mine For Keeps*, Little, Brown & Co., Boston, 1962. (Juv.)

Miers, Earl Schenck: *The Ivy Years*, Rutgers University Press, New Jersey, 1945. (Y)

Seckar, Alvar: *Misko*, Walck, New York, 1956. (Juv.)

PROGRAM #23

UNDERSTANDING THE CHILD AND YOUTH WITH EPILEPSY

OVERVIEW:

Epilepsy is one of the oldest diseases known to man and is a general name given to a loss of consciousness whose proximate cause is a disruption of normal cortical activity which may or may not be accompanied by various sorts of motor symptoms. The varieties of epilepsy, employment consideration, counseling as well as the educational and social ramifications will be discussed. (Participants from the Los Angeles County Epilepsy Society.)

CRITICAL VOCABULARY:

Grand Mal
Seizure
Petit Mal
Electroencephalogram (EEG)
Jacksonian
Psychomotor

Questions to consider during your readings and the telecast:

1. What are the historical antecedents regarding the attitude of society toward the epileptic?
2. What role does the EEG play in the diagnosis of epilepsy.
3. Describe how the teacher should handle a child who has a grand mal seizure in his or her classroom.
4. What type of treatment is recommended for epileptics?
5. In what ways is society still very harsh on persons with this disability?

Required Reading:

Kirk: Chapter 11

Magary and Eichorn: Reading #21

Suggested Reading:

Cruickshank: Chapter 7

Telford and Sawrey: The Exceptional Individual, Chapter

Jordan: The Exceptional Child, Chapter 8

Fiction Relating to Epilepsy:

Charyn, Jerome: Going to Jerusalem, The Viking Press, New York, 1967.

Frame, J.: The Edge of the Alphabet, George Braziller Inc., New York, 1962.

Griffin, C. F.: Nobody's Brother, Barrie & Rockliff, London, 1960.

Petrakis, Harry Mack: A Dream of Kings, David McKay Co., New York, 1966.

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PROGRAM #24

OVERVIEW OF CHILDREN AND YOUTH WITH ORTHOPEDIC AND HANDICAPPING MEDICAL CONDITIONS

OVERVIEW:

An interdisciplinary approach is needed to meet the needs of the handicapped child. This approach is carried out by schools, medical specialists, clinics and rehabilitation centers. The emphasis in this discussion will be on the methods the schools can best utilize in meeting the needs of these children.

CRITICAL VOCABULARY:

Acalculia
Agnosia
Agraphia
Aphasia
Apraxia
Congenital heart disease
Dysarthria
Muscular dystrophy
Rheumatic fever
Poliomyelitis
Tremor
Tuberculosis

Questions to consider during your readings and the telecast:

1. How can crippled children best be assimilated into the "normal" school environment?

2. Why is an interdisciplinary approach necessary in meeting the needs of the physically handicapped child?

3. What role can the teacher play in meeting the needs of the physically handicapped child?

4. What are some of the restrictions and future vocational limitations resulting from the various handicaps being considered?

5. What considerations are necessary in the amelioration of psychological adjustment difficulties in the physically handicapped child?

Required Reading:

Magary and Eichorn: Readings 20, 22, 27, 28, 29, 30, 31

Kirk: Chapters 11, 12

Suggested Reading:

Cruickshank: Chapters 6, 8

Telford and Sawrey: Chapter 13

Garrison and Force: Chapter 15

Fiction Relating to the Individual with Poliomyelitis:

Beim, Lorraine: Sunshine and Shadow, by Lorraine and Jerrold Beim, Harcourt, Brace & World, New York, 1952.

Beim, Lorraine: Triumph Clear, Harcourt, Brace & World, New York, 1946. (Y)

Cheney, Cora: Key of Gold, Holt Rinehart and Winston, New York, 1955. (Juv.)

De Angeli, Marguerite: The Door in the Wall, Garden City, Doubleday & Co., New York, 1949.

Lyons, Dorothy: Dark Sunshine, Harcourt, Brace & World, New York, 1951. (Y)

Marshall, Peter: The Raging Moon, Hutchinson & Co., London, 1964.

Sawyer, Ruth: Old Con and Patrick, The Viking Press, New York, 1946. (Juv.)

White, Nelia Gardner: The Pink House, The Viking Press, New York, 1950.

Whitney, Leon F.: That Useless Hound, Dodd, Mead & Co., New York, 1950. (Y)

Fiction Related to the Crippled:

Andrew, Prudence: The Hooded Falcon, New Authors Guild, New York, 1961. (Y)

Bok, Curtis: Maria, Alfred A. Knopf, New York, 1962.

Bristow, Given: Tomorrow is Forever, Thomas G. Crowell Co., New York, 1943.

Dickens, Charles: A Christmas Carol, E. P. Dutton, New York.

Dickens, Charles: Our Mutual Friend, New Oxford Illustrated Dickens, Oxford University Press, New Jersey, 1952.

Graham, Winston: The Walking Stick, Doubleday & Co., New York, 1967.

Grass, Gunter: Cat and Mouse, Signet Books, The New American Library, translated by Ralph Manheim from the German, New York, 1963.

Hagopian, Richard: Faraway the Spring, Charles Scribner & Sons, New York, 1952.

Turnbull, Agnes Sligh: The Golden Journey, Houghton-Mifflin Co., Boston, 1955.

White, Nelia Gardner: The Pink House, The Viking Press, Inc., New York, 1960.

PROGRAM #25

SCHOOL ARCHITECTURAL PLANNING FOR EXCEPTIONAL CHILDREN

OVERVIEW:

A child's physical environment can either facilitate or serve as a detriment to the learning process. The child who is in need of special education is in need of an environment that will enable him to utilize it, so as to be conducive to the remediation of his difficulties. The effects of this physical environment in relation to school architectural planning will be discussed.

CRITICAL VOCABULARY:

Unit (center)

Questions to consider during your readings and the telecast:

1. What exceptionalities require special architectural planning?
2. What learning factors are involved that may require special architectural planning?
3. Generally, what special facilities are necessary for the crippled child?
4. What are some examples of buildings designed for the crippled child?
5. What must a teacher need to know concerning the facilities for exceptional children?

Required Reading:

Magary and Eichorn: Reading #24

Fiction Relating to the Paraplegia:

Barton, Betsey: *The Long Walk*, Dwell, Sloan & Pearce, New York, 1948.

Buckner, Richard P.: *The Broken Year*, Doubleday & Co., New York, 1962.

Kellogg, Marjorie: *Tell Me that You Love Me, Junie Moon*, Farrar, Straus, Giroux, New York, 1968.

Nolan, Allan T.: *As Sounding Brass*, Houghton-Mifflin & Co., Boston, 1964.

Wetzel, Donald: *A Wreath and a Curse*, Crown Publishing Co., New York, 1950.

PROGRAM #26

SOCIAL AND EMOTIONAL DEVELOPMENT IN CRIPPLED CHILDREN

OVERVIEW:

The crippled child is often socially and emotionally retarded. Special educational approaches are required to promote socialization of the child leading to group participation, development of communication skills, and self-expression.

CRITICAL VOCABULARY:

Socialization
Projective Techniques
Frustration

Questions to consider during your readings and the telecast:

1. What educational methods can be used to promote socialization of crippled children?
2. In what ways is the social and emotional development of crippled children retarded?
3. What are some of the special needs of the adolescent in social and emotional development?
4. State objectives for a program to promote social and emotional development of crippled children.

Required Reading:

Magary and Eichorn: Reading 23

Kirk: Pages 285-291

PROGRAM #27

THE CHILD WITH AN AMPUTATED LIMB

OVERVIEW:

The child with an amputated limb presents a special problem to the educator and the therapist. The physical and psychological difficulties of the child with an amputated limb, as well as the amelioration of his difficulties, will be discussed.

CRITICAL VOCABULARY:

Amputee
Posthetic
Unilateral amputee
Bilateral amputee

Questions to consider during your readings and the telecast:

1. What are some of the unique problems of the amputee child?
2. How are some of the amputee's problems similar to children with other orthopedic impairments?
3. How can the teacher best function to facilitate learning and adequate social adjustment of the child amputee?
4. What is "invalidism?

Required Reading:

Magary and Eichorn: Readings 23, 25

Suggested Reading:

Cruickshank: Chapter 6

PROGRAM #28

REHABILITATION AND THE SCHOOLS

Guest: Rosemary Callahan, Department of Counselor Education, USC

OVERVIEW:

Rehabilitation refers to the restoration to a satisfactory physical, mental, social, or vocational status after a physical or psychiatric illness or impairment.

CRITICAL VOCABULARY:

Habilitation
Body image
Self realization

Questions to consider during your readings and the telecast:

1. Why are group activities important in the rehabilitation process?
2. How can a teacher or a therapist best understand the child's disability and its significance to him?
3. Why are physical education programs of great importance to the rehabilitation process?
4. What are some of the different kinds of rehabilitation programs in our schools today?

Required Reading:

Magary and Eichorn: Reading 26

Suggested Reading:

Wright, Beatrice: The Physically Disabled: A Psychological Approach, Harper, 1961.

PROGRAM #29

EDUCATING CHILDREN IN HOSPITAL SETTINGS

OVERVIEW:

In a hospital setting the medical treatment and requirements impose limitations on the scheduling of educational activities. The educational program, however, can contribute positively in the recuperation of the child through its psychological value. Depending on the condition of the child, teaching may take place at the bedside or in a separate area. Increasingly teachers are participating as members of hospital teams and attending case conferences.

CRITICAL VOCABULARY:

Convalescent home classes
Self-esteem
Compensation

Questions to consider during your readings and the telecast:

1. What are objectives of educational programs in hospital settings?
2. How can the teacher contribute to the child's development and recovery in the process of hospital instruction?
3. What special demands are made on the teacher who teaches in a hospital setting? What personal characteristics and attitudes are required?

Required Reading:

Magary and Eichorn: Reading 27

PROGRAM #30

ORGANIZATIONS THAT SERVE THE VISUALLY HANDICAPPED

OVERVIEW:

Among the organizations serving the visually handicapped are the National Society for the Prevention of Blindness and the Perkins School for the Blind. The Society for the Prevention of Blindness gathers and disseminates information concerning the causes and prevention of blindness. Special educational institutions, such as the Perkins School, offer broad educational programs for the blind to enable them to enter into and participate in adult society.

CRITICAL VOCABULARY:

Blindness
Visual Handicap
Partially Sighted

Questions to consider during your readings and the telecast:

1. What role does the National Society for the Prevention of Blindness perform for educators?
2. What unique services do special schools provide in educational programs for the blind?

PROGRAM #31

CAUSES OF BLINDNESS IN SCHOOL AGE CHILDREN

OVERVIEW:

Understanding the causes of blindness can contribute to a decline in the rate of blindness. Better medical care and awareness of dangers has led to a decrease in the rate of blindness resulting from infectious diseases, injuries, and retrolental fibroplasia. Prenatal causes continue to account for a large number of cases of blindness.

CRITICAL VOCABULARY:

Retrolental Fibroplasia
Retina
Optic Nerve
Corneal affections
Ophthalmologists
Uveal Tract

Questions to consider during your readings and the telecast:

1. What are the major causes of blindness and what steps can be taken to prevent blindness from these causes in school?
2. How can the teacher identify a child with visual difficulty? To whom should she refer the child?
3. How have some of the major causes of blindness been combatted? What steps were required to prevent retrolental fibroplasia?

Required Reading:

Magary and Eichorn: Reading 32

PROGRAM #32

EDUCATING BLIND CHILDREN

OVERVIEW:

Education of blind children must necessarily take into consideration the special developmental patterns which may or may not be unique to the blind. Though the goals of education may be similar to those of normal children, it is the means by which these goals are to be achieved which deserves special focus.

CRITICAL VOCABULARY:

Blindness
Visual acuity

Questions to consider during your readings and the telecast:

1. Discuss the educational provisions which may be provided for the blind relating these provisions to the same specific developmental requirements unique to the blind.
2. Differentiate among the purposes and programmatic consideration in educating the blind in private vs. public, integrated vs. special classes.
3. What might be the role of the school psychologist; an itinerant teacher; an art teacher in developing curriculum and serving the eductional needs of the blind?
4. What adaptations in curricular method, if any, are required for integrating totally blind children with sighted children?
5. Suggest the means by which Kindergarten teacher might provide an adequate screening procedure for identifying children with visual handicaps.
6. What is the significance of age of onset of blindness related to academic learning?

7. Describe the growth patterns of visually handicapped and blind children compared to normal sighted children. (These growth patterns may include motor, social, academic, speech, etc.)

8. Delineate the various catagories of visually handicapped children providing a differential description of each type.

Required Reading:

Kirk: Chapter 9

Magary and Eichorn: Readings 32, 33, 34

Suggested Reading:

Telford and Sawrey: Chapter 11

Fiction Relating to the Blind:

Bigman, S.: Second Sight, David McKay, Co., New York, 1959.

Bjarnhof, Karl: The Good Light, translated from the Danish by Naomi Walford, Alfred A. Knopf, Inc., New York, 1960.

Bjarnhof, Karl: The Stars Grow Pale, translated from the Danish by Naomi Walford, Alfred A. Knopf, Inc., New York, 1958.

Hubbard, P. M.: A Hive of Glass, Atheneum Publishers, New York, 1965.

Jay, Charlotte: The Fugitive Eye, Harper and Brothers, New York, 1953.

Kelly, William Melvin: A Drop of Patience, Doubleday and Company, New York, 1965.

Kipling, Rudyard: The Light that Failed, Doubleday and Company, New York.

Vance, M.: Windows for Rosemary, E. P. Dutton, New York, 1956. (Juv.)

PROGRAM #33

INTEGRATION OF THE HANDICAPPED WITH NORMAL CHILDREN IN REGULAR PUBLIC EDUCATION

OVERVIEW:

The major objective of programs to integrate the handicapped child into the regular educational system is to promote more normal social development of the child and to facilitate later integration into the community. It is also hoped that both the handicapped and the normal child will gain an understanding of individual limitations and differences.

Questions to consider during your readings and the telecast:

1. How can the teacher promote successful integration of a handicapped child into the regular classroom?
2. What special administrative considerations enter into a decision to allow the handicapped child to enter the regular classroom?
3. How can participation in the regular classroom be advantageous and disadvantageous to the handicapped individual and to normal children? Evaluate programs to integrate handicaoped children into the regular learning environment.

Required Reading:

Magary and Eichorn: Reading 34

PROGRAM #34

THE PSYCHOLOGY AND EDUCATION OF CHILDREN WHO ARE PARTIALLY SEEING

OVERVIEW:

The partially sighted child is often born unsuited for participation in schools for the blind and overlooked within the regular school system. The partially sighted child can benefit from relatively minor alterations in the learning environment such as lighting conditions and the use of mechanical devices which require less visual work. Recognition of the limitations of the partially sighted child can lead to provision of adequate learning conditions.

CRITICAL VOCABULARY:

Progressively myopic
Partially Seeing
Stabismus
Heterophoria
Albinism
Cataract
Snellen Notation
Snellen Test
Itinerant Teacher Plan

Questions to consider during your readings and the telecast:

1. What are the advantages and disadvantages of placing the partially seeing child in separate classes? In separate institutions?
2. What special considerations are necessary in integrating the partially seeing child into the regular classroom?
3. How can the teacher identify the partially seeing student?
4. How can the partially seeing child participate in group activities?
5. How is the social and intellectual development of the partially seeing child affected by his handicap?

Required Reading:

Magary and Eichorn: Readings 35, 36

Kirk: Chapter 8

PROGRAM #35

COLOR BLINDNESS IN CHILDREN: ITS EDUCATIONAL AND VOCATIONAL ASPECTS

OVERVIEW:

Color blindness is the (total color blindness is very rare) inability to distinguish colors on the part of a person able to see shapes and forms. The discussion of this topic will include the prevalence of color blindness, tests for determining color blindness, attitudes towards color blindness, and the psycho-educational means of ameliorating difficulties resulting from color blindness.

CRITICAL VOCABULARY:

Rods
Cones
Ishara

Questions to consider during your readings and the telecast:

1. What are the degrees of color blindness, and their resultant effect on one's educational and vocational performance?
2. How can teachers and psychologists best deal with a child who is partially or totally color blind?
3. What is the prevalence of color blindness among school children?
4. What are some of the tests available for determining color blindness?

Required Reading:

Magary and Eichorn: Reading 37

PROGRAM #36

OVERVIEW OF CHILDREN WITH COMMUNICATIVE DISORDERS

OVERVIEW:

Interpersonal interaction is not easily achieved for the child who has a communicative disorder. Speech and hearing difficulties vary in degree, as well as type of disorder. It will be the purpose of this lecture to survey the prevalence, types, and some of the causes of communicative disorders.

CRITICAL VOCABULARY:

Speech sound development
Speech fluency
Stuttering, cluttering
Articulatory defect
Aphasia

Questions to consider during your readings and the telecast:

1. Why is it necessary to diagnose communicative disorders early in the child's development?
2. What are some of the psychological difficulties encountered by a child who has difficulty relating to his environment?
3. What type of learning exists without communication?
4. How are speech and hearing problems related?
5. What is the prevalence of children with communicative disorders?

Required Reading:

Magary and Eichorn: Readings 38-45

Suggested Reading:

Frierson and Barbe: Readings 3, 18

PROGRAM #37

EDUCATING THE PRESCHOOL DEAF

Guests: John Tracy Clinic staff

OVERVIEW:

Since hearing is the basic mode of receiving information for most children, the teaching of preschool deaf children represents a special challenge. The psychological ramifications of this sensory deficit, along with the deficit itself, make it necessary that the teacher of the deaf receive special training. This program will explore issues in the education of the preschool deaf child.

CRITICAL VOCABULARY:

Primary handicap
Lip reading
Visual pattern of speech

Questions to consider during your readings and the telecast:

1. What psychological difficulties are encountered by the preschool deaf child in his interpersonal relationships?
2. How can language be effectively taught to the preschool deaf child?
3. What educational principles that apply to the hearing child may also be applied to the deaf child?
4. What special training does the teacher of the preschool deaf child require?

Required Reading:

Magary and Eichorn: Reading #40

Suggested Reading:

Keller, Helen: The Story of My Life, New York, Doubleday and Co., 1954.

Myklebust, H. R.: The Psychology of Deafness, New York, Grune and Stratton, 1960.

PROGRAM #38

SEVERE DEAFNESS IN THE YOUNG CHILD

Guests: Dr. Edgar Lowell and others of the John Tracy
Clinic of Los Angeles

OVERVIEW:

Severe deafness refers to a child who, although he may have residual hearing, cannot profit from instruction without intensive training, hearing aids and special instructional materials. He usually has a sixty to seventy-five decibel loss. The psycho-educational aspects of severe deafness will be discussed, emphasizing realistic goals in the educative process.

CRITICAL VOCABULARY:

Severe loss of hearing
Educationally deaf
Speech reading
Deafened
Manual method
Oral method

Questions to consider during your readings and the telecast:

1. How is the deaf child's thought pattern affected by his severe deafness?
2. What are the major goals of deaf education?
3. How can the severely deaf child best utilize his sensory experiences in achieving integration with his environment?
4. How can the special teacher help the severely deaf child to best apply his capabilities in fulfilling specific educational goals?
5. How can the parents contribute to the overall educational and psychological development of their child?

Required Reading:

Kirk: Chapter 7 (Readings 38, 39, 40)

Magary and Eichorn: Readings 39, 40

Suggested Reading:

Keller, Helen: *The Story of My Life*, New York, Doubleday and Co., 1954.

Morkovin, Boris B.: 1967 USC Distinguished Lecture Series, *The Role of Language in the Development of the Preschool Deaf Child*, University of Southern California Press, 1967.

Mylklebust, H. R.: *The Psychology of Deafness*, New York, Grune and Stratton, 1960.

Fiction Relating to the Deaf:

Andrew, Prudence: *Ordeal by Silence*, G. P. Putnam's Sons, New York, 1961.

Field, Rachel: *And Now Tomorrow*, The Macmillan Company, New York, 1942.

Kennedy, Margaret: *Not in the Calendar*, The Macmillan Company, New York, 1964.

McCullers, Carson: *The Heart is a Lonely Hunter*, Houghton-Mifflin Company, New York, 1961.

Robinson, Veronica: *David in Silence*, Andre Deutsch, London, 1965. (Y)

Williams, Joan: *The Morning and the Evening*, Atheneum Publishers, New York, 1961.

PROGRAM #39

AN OVERVIEW OF SPEECH DEVELOPMENT IN CHILDREN

OVERVIEW:

Speech and language are the primary modes of communication among human beings. From the time an infant makes animal-like grunts, man uses his vocal mechanisms to express himself to the world around him. Prominent linguists state that they still don't know precisely how an infant learns language, but there is a great amount of observational data on speech and language behavior of children. This lecture will cover the general principles of speech development.

CRITICAL VOCABULARY:

Fluency
"Baby talk"
Voiceless sounds
Symbol system

Questions to consider during your readings and the telecast:

1. Why do certain speech sounds precede others in the speech development of the child?
2. What are the determinants of our speech behavior?
3. Why does the three year old child have defective articulation as compared to the adult?
4. What is the relationship between language development and socio-economic status?
5. What is "babbling" in infancy?

Required Reading:

Magary and Eichorn: Reading #41

Suggested Reading:

Carroll, J. B.: *Language and Thought*, Englewood Cliffs, New Jersey, Prentice-Hall, 1964.

PROGRAM #40

HOW TO HELP THE CHILD WITH MINOR SPEECH DEFECTS

OVERVIEW:

A minor speech defect in a child is often overlooked in the classroom. On the other hand, a minor speech defect may call unfavorable attention to the child. The consequences of both of these situations may result in the inhibition of the learning process as well as psychological adjustment difficulties. This discussion will stress the ways of ameliorating such a situation.

CRITICAL VOCABULARY:

Articulation
Cleft palate
Dysarthria
Misarticulation
Dysphonia
Dysrhythmia
Phonation
Resonance
Hypernasal

Questions to consider during your readings and the telecast:

1. What are some of the causes of minor speech defects?
2. What are the major classifications of speech defects?
3. How do speech defects serve as a detriment to the learning process?
4. What are some of the methods of remediating speech defects?
5. How can the teacher recognize minor speech defects?

Required Reading:

Kirk: Chapter 12

Magary and Eichorn: Readings 42, 43, 44

Suggested Reading:

None

PROGRAM #41

STUTTERING: ITS CAUSES AND TREATMENTS

OVERVIEW:

Children who stutter constitute 6.5 percent of all children with speech defects. Stuttering will be defined for the purposes of this course, to cover the entire range of rhythmic disorders in speech. It is primarily a nonfluency of speech and is a disturbance of the normal flow and rhythm of speech. It involves block, hesitations and repetitions of sounds, syllables, words or phrases. The causes, therapies, and theories regarding stuttering are many. Stuttering probably has multiple causation.

CRITICAL VOCABULARY:

Stammering
Cluttering
Organic causes
Functional causes

Questions to consider during your readings and the telecast:

1. Give some of the research and arguments in support of organic causation.
2. Give some of the research and arguments in support of functional causation.
3. Distinguish between primary and secondary stuttering.

Required Reading:

Magary and Eichorn: Reading 44

Kirk: Chapter 12

Suggested Reading:

Robinson, F. B.: *Introduction to Stuttering*, Englewood Cliffs, New Jersey, Prentice-Hall, Inc. 1964.

PROGRAM #42

TEACHING AND UNDERSTANDING CHILDREN WITH APHASIA AND OTHER ORGANIC COMMUNICATIVE HANDICAPS

OVERVIEW:

By definition, organic communicative handicaps are dissimilar to other types of communication disorders. The most prevalent of these in the literature is aphasia. Aphasia is defined as "a defect in the ability to use or to comprehend language which is the result of a deficit in the central nervous system." The discussion on this section will emphasize the general nature of aphasia and other organic communication difficulties, as well as ways of teaching such children.

Questions to consider during your readings and the telecast:

1. What are the types of aphasia?
2. Why are some aphasic children diagnosed as deaf?
3. Are children with aphasia and other communication handicaps receiving sufficient therapy in the U.S.?
4. Aside from aphasia, what are the other types of organic communication disorders?
5. What procedures can teachers use to teach children with aphasia and other related organic difficulties?

Required Reading:

Magary and Eichorn: Reading #45

Suggested Reading:

None

PROGRAM #43

CHILDREN WITH SOCIAL-EMOTIONAL PROBLEMS

OVERVIEW:

Defining the emotionally disturbed child is a difficult task. For our purposes, emphasis will be placed on children who have difficulty interacting with their peers, parents and their environment. The discussion will cover a background of emotional difficulties in children, as well as methods for coping with and ameliorating such difficulties.

NINE BASIC SYMPTOMS FREQUENTLY ASSOCIATED WITH FUNCTIONAL BEHAVIOR PROBLEMS IN CHILDREN

1. ABNORMAL MOTOR ACTIVITY. Such a child is overactive. He fidgets. He jumps from one activity to another. He may talk in disorganized torrents. Or, he may be unusually slow in everything he does.

2. POOR COORDINATION. This symptom shows up in clumsiness. The youngster has trouble making his eyes and hands function together. He may have difficulty with fine-muscle activity, such as buttoning, drawing, writing. Or, he may be slow learning to walk, ride a bicycle, or develop skill in sports.

3. IMPULSIVENESS. A child with functional behavior problems can't seem to keep from touching everything and everyone around him. Small stimuli can set him off. He acts, and often talks, before he thinks. He is unpredictable, unmanageable.

4. SHORT ATTENTION SPAN. Concentrating on any one thing, such as what the teacher is saying or what's written on the blackboard, is difficult for a youngster with functional behavior problems. He is easily distracted, often by minor noises or movements in the classroom. Some of these children can become "locked" in an activity, repeating it needlessly until helped to stop.

5. PERCEPTUAL DISABILITIES. These can involve the visual, auditory, or kinesthetic and tactile senses, so that a child does not see what others see or hear what they hear or have the same sense of space and size relationships, although there is nothing wrong with his eyes, ears, or other sense organs.

6. SPECIFIC LEARNING PROBLEMS. Reading, writing, spelling, and arithmetic tend to be difficult for a child with functional behavior problems. But these problems are spotty. He may do well in some areas, and poorly in others. His overall I.Q. score may be in the average range, yet he will score quite high on some subtests and very low on others.

7. EMOTIONALLY HIGHSTRUNG. The child with functional behavior problems is often irritable, overly sensitive, quick tempered, explosive, moody, hard to live with. He flashes between tantrums and remorse. He panics easily. His tolerance for failure and frustration is low.

8. LANGUAGE DISORDERS. Speech irregularities are common. Such a youngster may be slow to talk and hard to understand.

9. "SOFT" NEUROLOGICAL SIGNS. Specific findings of brain damage are not often found, but a child with learning problems often has small indication that something is wrong. He may be cross-eyed. His eye-hand coordination is poor. He may not be clearly right or left handed. Or he may be right handed, but left-eyed. He may have a history of head banging, teeth grinding, bed wetting, sleep problems.

CRITICAL VOCABULARY:

"Acting-out"
Identification
Neurosis
Psychopathology
Psychosis
Regression

Questions to consider during your readings and the telecast:

1. How can a child's intellectual functioning be effected by emotional difficulties?

2. Why have the problems of the withdrawn child been relatively neglected as compared to those of an "acting-out" child?

3. How can a teacher learn to deal with her own anxiety that has been induced by emotional difficulties in her classroom?

4. In what ways can other individuals represent sources of fear to an emotionally disturbed child?

5. What types of school facilities are conducive to the overall development of the emotionally disturbed child?

Required Reading:

Magary and Eichorn: Readings 46, 47, 48

Suggested Reading:

See special bibliography that follows.

REFERENCES ON THE EDUCATION OF EMOTIONALLY DISTURBED CHILDREN

Ashton-Warner, S., *Teacher*. New York: Bantam Books, 1964.

A teacher of the Maori of New Zealand relates her experience which contradicts traditional concepts of the learning process.

Berkowitz, Pearl H. and Rothman, Esther P. *The Disturbed Child: Recognition and Psychoeducational Therapy in the Classroom*. New York: New York University Press, 1960.

Suggestions for the classroom teacher to enable him to detect emotional disturbances and provide psychological treatment in the classroom.

Bower, Eli M. *Early Identification of Emotionally Handicapped Children in School*. Springfield, Illinois: Charles C. Thomas, Inc., 1960.

A research study to determine if the teacher can help in the screening of emotionally handicapped children.

Bower, Eli M. *The Education of Emotionally Handicapped Children*. Sacramento, California: California State Department of Education, 1961.

Report to the California Legislature, giving a summary of the research framework, methodology and findings of a report on problems of identifying emotionally disturbed children in public schools.

Bower, Eli M. and Lambert, Nadine N. *A Process for In-School Screening of Children with Emotional Handicaps*. California State Department of Education, 1961.

A manual for school administrators and teachers.

Braithwaide, E. R. *To Sir, With Love*. Englewood-Cliffs, New Jersey: Prentice-Hall, Inc., 1959.

True story of the growth of understanding in a classroom of hostile teenagers in the London slums.

Contra Costa County Schools Office. A Resource Book on Education of the Emotionally Handicapped Child. California,

Reports on trends, typical programs and an extensive bibliography are included in this resource book.

Donahue, G. and Nichtern, S. Teaching the Troubled Child. New York: The Free Press, 1965.

This book outlines a program for the education of troubled children within a regular school system.

Haring and Phillips. Educating Emotionally Disturbed Children. New York: McGraw-Hill, 1962.

A description of the operational philosophy of a structured classroom program for emotionally disturbed children.

Hollister, W. G. and Goldston, S. E. Considerations for Planning Classes for the Emotionally Handicapped. Washington, D.C.: The Council for Exceptional Children, 1962.

A series of educational processes designed to match a pupil's problem with specific classroom activities are described.

Kaplan, Louis. Mental Health and Human Relations in Education. New York: Harper and Brothers, 1959.

Based on the premise that maladjustment is learned, therefore, attack through prevention--contends that schools can educate for mental health.

Krugman, Morris, Orthopsychiatry and the School. American Orthopsychiatric Association, 1958.

A variety of approaches are presented in the 26 articles which demonstrate the advantages of combining the contributions from orthopsychiatry and education.

Long, Nicholas, Morse, William, Newman, Ruth, Editors. Conflict in the Classroom: The Education of Emotionally Disturbed Children. Belmont, California: Wadsworth

Publishing Company, 1965.

A wide range of authors and researchers are represented, as the editors present material posing questions regarding the diagnosis, treatment and education of emotionally disturbed children.

Moak, Helen. The Troubled Child. New York: Henry Holt and Company, 1958.

Real-life situations are portrayed in an attempt to convey information and understanding to parents of troubled children.

Morse, William and Cutler. Public School Classes for the Emotionally Handicapped: A Research Analysis. Washington, D.C.: Council for Exceptional Children, N.E.A., 1964.

Detailed information on special class programs is given through a study of classroom practice, personnel involved and theoretical orientation.

Smith, Bert Kruger. No Language but a Cry. New York: Beacon Press.

Personal case histories are used to inform the reader of the symptoms and possible causes of emotional disturbance. The available services and their advantages are discussed.

Conference Reports:

Castricone, Nicholas and Galleen, John, Editors, A Focus on Maladjusted Children. Charlottesville, Va.: Reynolds Company, Proceedings of the Virginia Federation Council for Exceptional Children, Eighth Annual Convention, 1965.

Knoblock, Peter, Editor, Educational Programming for Emotionally Disturbed Children: The Decade Ahead. Syracuse, New York: Division of Special Education and Rehabilitation, Syracuse University, 1964.

Conference Proceedings, Three-State Institute for University and State Department of Education Personnel in Exceptional Child Education, sponsored by the State

Department of Education, Tallahassee, Florida.

Bibliographies:

California State Department of Education, Bibliography on Educationally Handicapped Minors, Sacramento, Calif., 1965.

New York Board of Education, The Emotionally Disturbed Child: A Bibliography. Brooklyn, New York, 1962.

PROGRAM #44

WHAT IS CHILDHOOD AUTISM?

Guests from the Los Angeles County Autistic Society

OVERVIEW:

Some clinicians feel that it is appropriate and necessary to differentiate between "Infantile Autism" and "Childhood Schizophrenia," using various criteria such as "age of onset," organic vs. functional etrology, etc., to make this differential diagnosis. However, Autestic components may be found in most cases of "Childhood Schizophrenia" and so-called "Infantile Autism" readily presents to the astute observer much that is found in the Childhood Schizophrenia Syndrome.

CRITICAL VOCABULARY:

Differential Diagnosis
Irving Lovass
Bernard Rimland
Leo Kanner
Bruno Bettelheim

Questions to consider during your readings and the telecast:

1. What kinds of behavior might you expect to observe in children who have been diagnosed as manifesting autistic-type behaviors?
2. What is the developmental and educational prognosis for such children?
3. How would you resolve the problem of labeling children who manifest autistic-type behaviors for educational or remediation purposes?

Required Reading:

None

Suggested Reading:

Kessler, Jane W.: Psychopathology of Childhood, Chapter 11, Prentice Hall, Englewood Cliffs, New Jersey, 1966.

PROGRAM #45

PRESCHOOL PROGRAMS FOR EMOTIONALLY DISTURBED CHILDREN

OVERVIEW:

Preschool programs for the emotionally disturbed child include day care and institutional arrangements. Individualized programs are required to provide educational experiences appropriate for each child. Within the individual's abilities and limitations, development of basic skills, social interaction and creative expression are encouraged. Play therapy, behavioral modification and group therapy are techniques which can be utilized in special classes with the preschool child in conjunction with a therapist.

CRITICAL VOCABULARY:

Play therapy

Questions to consider during your readings and the telecast:

1. How can the teacher work effectively in conjunction with the therapist in developing programs for the emotionally disturbed child?
2. What role can educational achievement play in the development of individual self-esteem?
3. How can the teacher promote group participation of the emotionally disturbed preschool child?
4. What special problems of motivation are encountered with the emotionally disturbed child?

Required Reading:

Magary and Eichorn: Reading 48

PROGRAM #46

DELINQUENCY AND THE SCHOOL

OVERVIEW:

Juvenile delinquency refers to the violation of legal or moral codes by children or adolescents. Studies consistently show that most so-called delinquents are apparent slow learners with a significant amount of them not graduating from high school. The psycho-educational ramifications of delinquency will be discussed, with emphasis placed on how the school can best serve as a preventive agent.

CRITICAL VOCABULARY:

Reformatory
Semidelinquent
Dead-end school

Questions to consider during your readings and the telecast:

1. What are the significant causes of delinquency?
2. What is currently being done to prevent delinquency?
3. How can the school best contribute in the prevention of delinquency?
4. What areas of delinquency require further research?
5. How can the teacher best interact with a "problem-child" in the classroom, with regard to social and learning problems?

Required Reading:

Magary and Eichorn: Readings 51, 52, 54

Suggested Reading:

Telford and Sawrey: Chapter 16

Cruickshank: Chapter 12

Fiction Relating to Juvenile Delinquency:

Hunter, Evan: *The Blackboard Jungle*, Simon and Schuster, New York, 1954.

Macaulay, Rose: *The World My Wilderness*, Farrar, Straus, Cudahy, New York, 1957.

Motley, Willard: *Let No Man Write My Epitaph*, Random House, New York, 1958.

Smith, Vian: *A Second Chance*, Doubleday and Company, New York, 1966.

Symons, J.: *The Progress of a Crime*, Harper and Row, Inc., New York, 1960.

PROGRAM #47

THE CHILD WITH A SPECIFIC LEARNING DEFICIT

OVERVIEW:

Many children, although they have average or high intelligence are unable to function satisfactorily in certain learning areas. It will be the purpose of this discussion to cover the areas of learning disabilities, the diagnosis of such disabilities, the resultant psychological difficulties, and the method of remediation.

CRITICAL VOCABULARY:

Alexia
Agraphia
Acalculia
Learning disability
Hyperactivity
Perception
E H class

Questions to consider during your readings and the telecast:

1. What are some techniques for the remediation of learning deficits?
2. What are the principle areas of learning disabilities?
3. What are some of the diagnostic procedures for learning disabilities?
4. To what extent is language involved in the variables associated with learning deficits?
5. What disciplines are involved in the remediation of learning deficits?

Required Reading:

Magary and Eichorn: Readings 57, 58

Suggested Reading:

Frierson and Barbe: Entire Book

McCarthy and McCarthy: Learning Disabilities

Haring and Schiefelbusch: Methods in Special Education, Chapters 7, 8

PROGRAM #48

PSYCHOLOGICAL FACTORS IN READING AND SPELLING DIFFICULTIES

OVERVIEW:

The interrelatedness of various psychological factors in the etiology of reading and spelling difficulties implies that learning is a multi-faceted, dynamic process. This discussion will cover these psychological factors and how they relate to the reading and spelling process.

CRITICAL VOCABULARY:

Bender Gestalt test
Cerebral dominance
Laterality
Phonetic generalization
Thematic Appreception Test
Verbal expression

Questions to consider during your readings and the telecast:

1. How is so-called "I.Q." related to reading and spelling difficulties?
2. What are some of the means for diagnosing psychological factors responsible for reading and spelling difficulties?
3. What processes are involved in "verbal expression?"
4. How is mental imagery involved in spelling?
5. Why is prompt diagnoses of reading and spelling so important?

Required Reading:

Magary and Eichorn: Readings 57, 58

Suggested Reading:

Frierson, E. C., and Barbe, W. B., (eds): Educating Children with Learning Disabilities, Appleton Century Crafts, 1967: Reading 38

PROGRAM #49

HELPING THE CHILD WHO IS A POOR READER

Guests: Dr. Grayce A. Ransom and staff, USC Reading Clinic

OVERVIEW:

Reading is not a subject in and of itself, but a means for acquiring knowledge and a means for socialization. Therefore, a poor reader will often times have other learning and psychological difficulties. The possible causes and programs for remediation of reading difficulties will be emphasized in this discussion.

CRITICAL VOCABULARY:

Corrective reading
Developmental reading
Dyslexia
Reading Index
Reading Laboratory
Reading Reaching
Reading Quotient

Questions to consider during your readings and the telecast:

1. What cognitive and physical tasks must a child be capable of before he can read?
2. How does reading retardation differ from mental retardation?
3. How can reading retardation be measured?
4. What are some of the approaches to the remediation of reading difficulties?
5. What type of preparation does the remedial teacher need?

Required Reading:

Magary and Eichorn: Reading 56

PROGRAM #50

THE DISADVANTAGED LEARNER

OVERVIEW:

The disadvantaged may not be identified as any specific group. Some writers would include in the disadvantaged classification those children who come from homes where money is adequate but where love and security are lacking. Generally however, writers have concentrated on those segments of society where the child has experiences which are considerably different from the mainstream of American society. Thus, certain ethnic groups, Mexican-Americans, Blacks, Chinese-Americans and others are disadvantaged in certain places and certain times. Children of displaced workers, and migratory farm workers and American Indian children are also frequently included. The disadvantaged child frequently has physical problems which interfere with school success. Pre and Post natal care have sometimes been lacking. The child frequently lacks the important relevant readiness experiences. Probably the most striking problem presented by the disadvantaged child is inadequate language skill development. Some other traits which have been noted by authorities are: (1) lack of confidence and/or poor self-concept; (2) preoccupation with the present; (3) lack of interest in the abstract; (4) poor performance on standardized tests; (5) short attention span; (6) negative attitudes toward authority.

CRITICAL VOCABULARY:

Multisensory learning
Socio-economic class
Vertical mobility
Centercity
Urban Teacher Corps

Questions to consider during your readings and the telecast:

1. What kinds of educational programs have been conceptualized for preschool disadvantaged children?
2. Trace the development of the federal interest in the education for the disadvantaged.
3. What type of methods have been most effective with the disadvantaged child in the elementary school?

Required Reading:

Magary and Eichorn: Readings 60-64

Suggested Reading:

Teaching the Disadvantaged Child, ed. by Sidney W. Tiedt, Oxford University Press, New York, 1968.

Perspectives in the Education of Disadvantaged Children, ed. by Cowles, Milly, The World Publishing Company, Cleveland and New York, 1967.

Headstart on Headstart: A Thirty Year Evaluation

HAROLD M. SKEELS

If intelligence is static, a fixed entity, and relatively unmodifiable by changes in environmental impact, then changes in family constellation, living conditions, and amount and kind of education can be expected to have little influence on the mental level of individuals. On the other hand, if intelligence shows change in relation to shifts in environmental impact, then our concept must include modifiability, and the implications for parents, educators, and child welfare workers become more challenging.

This latter concept was postulated by Alfred Binet. In his significant book entitled, *Les Idees Modernes Sur Les Enfants*, published in 1909, Binet devotes an enlightening chapter to the topic, INTELLIGENCE: ITS MEASUREMENT AND EDUCATION. He is surprised and concerned at the prejudice against the concept of modifiability of intelligence. To quote: "Some recent philosophers appear to have given their moral support to the deplorable verdict that the intelligence of an individual is a fixed quantity, a quantity which cannot be augmented. We must protest and act against this brutal pessimism. We shall endeavor to show that it has no foundation whatsoever."

Binet goes on to cite observations and situations relating to the teaching of (functionally) subnormal children, summarizing as follows: "A child's mind is like a field for which an expert farmer has advised a change in the method of cultivating, with the result that in place of desert land, we now have a harvest. It is in this particular sense, the only one which is significant, that we say that the intelligence of children may be increased. One increases that which constitutes the intelligence of a school child; namely the capacity to learn, to improve with instruction."

In the present article an attempt will be made to summarize a series of research studies carried on over a period of one year by several staff members of the Iowa Child Welfare Research Station, State University of Iowa, on the mental development of foster children in relation to differential environmental impact, to report our transitional feelings and thinking, and to discuss the implications of the studies. In so doing we will spare the reader from any extended statistical or technical presentation, inasmuch as the several studies have been previously reported in the scientific literature.

None of the studies was initiated on a basis of "arm chair" hypotheses, but rather as an outgrowth of clinical service projects. With the initiation of psychological services in the State Orphanage in 1932, we were concerned with the policies relating to early placement of infants in adoptive homes. The superintendent of the Orphanage, a lay person, felt very strongly the importance of placement being as early as possible. Suitability and readiness for placement were based on two considerations: whether or not the infant had the right number of fingers and toes—as determined by the pediatrician's examination; and if, in addition, the infant smiled at him—a casual subjective observation of function. Social history information was not considered as having value in terms of placement suitability. Therefore, an infant from a feebleminded mother was as apt to be placed as one whose mother was a college graduate.

Considering the accepted concepts of mental growth back in 1932, our concerns over such a placement policy were great. An evaluation of social histories on infants already placed augmented this concern. Since legal adoption, according to state rules, could not be consummated until at least one year after placement, our one immediate recourse seemed to be to make a psychological examination on each placed infant prior to completion of adoption. Accordingly, each home was visited near the end of the placement year and an individual psychological examination was made by trained and experienced psychologists.

We can never forget our concern and surprise on the first twenty-five cases thus examined. In each case, the social history had been carefully read and evaluated prior to the home visit. In many instances, we arrived at the home all prepared to outline a developmental program for a dull or retarded child. In some instances, reported feeblemindedness in one or both true parents, delinquency, and institutionalization, caused us to anticipate the need of removing a mentally defective child requiring continued institutional care.

It was indeed a pleasant surprise to find, after examining and observing child after child, not only normal mental development, but above average and superior intelligence as measured on the intelligence test and corroborated by observations of behavior and information furnished by the adopting parents. In no instance did it seem necessary to consider plans for a dull or defective child.

With these initial findings on the first twenty-five children, we could not feel that in each case nature had been so kind as to select all of the so-called "good inherited qualities" and eliminate all of the "bad." Rather, it appeared that there must be other factors operating which would cause us to re-evaluate existing concepts.

The need for extended and continuous research was obvious. Also, by virtue of such placement procedures in the State agency, here was a "gold mine" for such studies. Here was a setting in which children were placed in normal adoptive homes, who under more refined and accepted placement procedures, would never have been put into such homes. Rather, they would have been placed in paid boarding homes and institutions for extended observation.

This, therefore, was the setting in which a series of extended research studies was carried on over a period of thirty years, by several of us then on the staff of the Iowa Child Welfare Research Station.

Let us first look at the study of the mental development of children in adoptive homes—as evidenced by the first, or adoption, examination. Included were 147 children under six months of age, all of whom had been placed in adoptive homes with the average age at time of placement being three months. Here we wanted a group of children who had experienced only the environment of the permanent adoptive home from early infancy.

The true parents of these children represented a selection downward on a basis of social factors such as education, occupation, income, living conditions, etc. There were higher than average frequencies of individuals on relief, institutionalization—including penal, mental, and defective—as well as repeated court citations.

In contrast, the adoptive parents represented a definite selection upward. Approved adoptive homes gave evidence of culture, refinement, education, and an intellectual and emotional understanding of the needs of children. In each case the child was a wanted child, sure of receiving an abundance of love and affection.

Results of these first examinations of 147 adoptive children, examined at an average age of 24 months, indicated that the group was above average in intelligence, the mean IQ being 115. Ninety-six per cent were of normal or above intelligence. Only four per cent were below average and none below the dull-normal level.

That was the beginning of the adopted child studies. We will come back to it soon.

A second study evolved out of some rather casual observations of children in the Orphanage. One day my colleague and I were jesting about guessing IQ's from the ages of the children. If one had examined a family of children and would read off the obtained IQ's, the other—not having seen the children—could guess the relative ages of the children with a fair degree of accuracy. *It appeared that when families were committed, the younger members showed a higher level of intelligence than the older ones.* The frequency of such an occurrence suggested the importance of a study bearing on this question. Hence the study of the mental development of children from underprivileged homes.

Four hundred and seven children from 132 homes were included in this. These children also came from homes representing a selection downward on all indices relating to socio-cultural status. In fact, these children represented an even lower selection. After all, things have to be pretty bad before a court will step in and pronounce a judgment that the parents are unfit to have custody of their own children. The children ranged in age at the time of examination from one to fourteen years. Since the group included only those coming directly from their own homes to the Orphanage, ages represented the length of time that they had been exposed to an underprivileged home impact.

The level of intelligence for the entire group of 407 children was somewhat below average, the mean IQ being 88.5. There was a definite trend for level of intelligence to decrease with an increase in age. Children from one to seven years of age were of low average intelligence, with a mean IQ of 96; children eight to eleven years were of dull normal intelligence, mean IQ 87; and children twelve to fourteen years of age were on an average of borderline intelligence, that is, with a mean IQ of 78. In other words, a child exposed to an inadequate home for twelve or more years could be expected to reach a level of intelligence classifiable as "near feeblemindedness."

At this stage, and in the light of the two foregoing studies, two hypotheses could be postulated relative to mental growth. First, that children from so-called "poor stock," whose true parents fall in the lower sociocultural levels, under an enriched environment such as the adoptive homes, start out well, showing a mushroom or "hot house" type of mental growth, but as age increases this rate will decline, with a subsequent mental level which is comparable to that of their true parents. Second, that children born at all socio-cultural levels, and in the absence of overt pathology, have sound biological inheritance within a normal range, but later mental growth is stunted by lack of opportunities in inadequate homes.

To test these hypotheses further, we made a study of the younger children from the underprivileged home group, ***following placement in above average adoptive homes.*** Sixty-five preschool age children examined following removal from their own underprivileged homes, at an average age of 3.5 years, were shortly placed in adoptive homes far superior to their own homes. The average IQ before placement was 98, and on second examination after one year in an adoptive home, was 104-showing an approximate gain of six points. Additional follow-up tests were available on twenty-four of these children two or more years following placement which showed an average of ten points gain in IQ. Thus, we see that the rate of mental growth of these younger children increased with age under adoptive home conditions in contrast to their own brothers and sisters of comparable ages but who had continued to live that extra amount of time in their own less adequate homes. That is, those remaining went down in IQ.

The next study which we shall consider grew out of a clinical surprise. Two little girls were admitted to the Orphanage nursery, one ***thirteen months*** of age and one ***sixteen months.*** There world had not included loving mother care. The mother was an inmate of a state hospital with a diagnosis of psychosis with mental deficiency. There was a lineage of inadequacies in both histories.

These youngsters were pitiful little creatures, of the runny-nose variety, emaciated, undersized and lacking in muscular tonus. Both children were full term normal delivery with no indications of birth injury or glandular dysfunction. The pediatrician's examination was essentially negative with no indications of physiological or organic defects.

Our psychological examinations showed an intellectual level comparable to that for low grade mental defectives, with development being at *six and seven months* respectively. They were 13 and 16 months of age. This was further confirmed by our observations of their behavior in the nursery, and by reports of the superintendent of nurses, and by the pediatrician's examination. Accordingly, they were considered unplaceable, and transfer to a school for feebleminded was recommended with a high degree of confidence. We quote from the recommendations for transfer as follows: "C.D.: Diagnosis of mental ability: Mental deficiency of imbecile level, which will probably continue with an increase in age. Prognosis: Poor. With this deficiency in mental development, C.D. will be unable to make her way outside the care and protection offered by an institution for feebleminded children." Recommendations on the second child were similar. Accordingly, these children were transferred to the school for feebleminded shortly thereafter.

It sometimes happens that one's sins catch up with him. This was the case with the author by virtue of his position as Director of Psychological Services in the various state institutions. Six months after transfer, we were visiting the wards at the school for feebleminded in connection with regular duties, and noticed two little girls. We scarely recognized them at first, and were surprised to see what appeared to be remarkable development. They seemed to have a feeling of security, of being loved and wanted, of amounting to something. Accordingly, we gave them psychological examinations and found that they were approaching normal mental development for their age. Twelve months later we re-examined them, and then again when they were forty and forty-three months old. These later examinations gave unmistakable evidence of mental development being well within the normal range for their ages.

What had happened? How could this be? We still felt that our initial evaluations gave a true picture of functional capacity at that time. We were equally confident that later appraisals showed normal mental growth.

Our attention, therefore, turned to considerations of what life might have held for these children during this interim period. They had been placed in one of the wards of older brighter girls, ranging in age from eighteen to fifty years and in mental age from five to nine years. In each case one or more of the older girls had "adopted" this baby with others of the girls serving as fond adoring aunts. Attendants and nurses also gave of their time and affection. These children were essentially the only preschool children on the ward, other than a few hopeless bed patients with physiological defects. By contrast, these children were "wonderful." The attendants would take these two children with them on their days off, giving them car rides and taking them downtown to the store. Toys, picture books, and play materials were purchased in great abundance by these admiring adults. The older girls would buy print cloth with their own spending money and then fondly make pretty little dresses for them. The girls would show the children picture books and play with them during most of their waking hours. Here then was a "home" setting charged with mother love and rich in experiences of an interesting and wholesome nature and geared to their level of development.

We recognized that as the children got older their developmental needs could be met less adequately in this type of a setting. Furthermore, they were now normal, and the need for institutionalization no longer existed. Accordingly, they were transferred back to the Orphanage and shortly thereafter placed in adoptive homes.

The problem then facing us was what to do with nursery age children coming to the Orphanage and showing functional mental retardation. At that stage they could scarcely be placed directly in adoptive homes, for we had no assurance that subsequent development would consistently be accelerated. In the state program, we had no recourse to the use of paid boarding or foster homes for developmental purposes. *The Law at that time limited care to that of free home or institution.* Our experiences had told us that to hold babies for development, in a large orphanage nursery, mean holding them for death, mental deficiency, or psychopathology. In spite of excellent medical care and available nutritious formulas, babies just don't develop without individualized loving care. With no criticism of the nursing staff, and considering the large number of babies, attention of necessity, was pretty much limited to physical care—bathing, changing, and at least a start on nutrition by placement of the nipple between the lips. Is it any wonder that the child would literally and figuratively turn his head to the wall and say, "What's the use?" Note that this was all before the "deprival" issue came into the literature.

A fantastic idea struck us (and this is the essence of the third study), and we went to the Chairman of the Iowa Board of Control of State Institutions with the following question: How about transferring mentally retarded children in the Orphanage nursery, one to two years of age, to the institution for feebleminded in order to make them normal? He rightly thought we were crazy, but being long suffering and also having grave concern as to the welfare of these children, he went along with the idea. This then was the birth of the "Study of the Effect of Differential Stimulation on Mentally Retarded Children." This is the first known "Headstart" program.

The experimental group included *thirteen* children, ranging in age from seven months to thirty-six months with a mean age of nineteen months at time of transfer. These children were considered as "house guests" at the school for feebleminded. The length of the experimental period or "visit" was on a basis of subsequent rate of development.

The average IQ of these children at time of transfer was 64, *the range being from 35 to 89*. The range of the experimental period was from six months to fifty-two months *with the average being nineteen months*. Psychological evaluations of development were made from time to time during this period. On the last examinations at the close of the experimental period, the average IQ was 92, representing an average gain of 28 points. Every child showed a gain, the range being from 7 to 58 points. Three children made gains of 45 points or more, and all but two children gained more than 15 points.

The contrast group included twelve children in the Orphanage nursery of comparable ages to the experimental children, but who *on admission were well within the range of normal intelligence.* The mean chronological age at time of first examination was 17 months with a range from 12 months to 22 months. The average IQ at this time was 87. (Remember, the average IQ was only 64 for the experimental group). For various reasons these children had not been placed in adoptive homes, but rather were exposed to the Orphanage setting for a period of time comparable to that of the experimental group children in the "house guest" status. The end test, or evaluation, on the contrast children at an average age of 47 months, represented a time interval of thirty months following the first examination. The mean IQ on this last test was 61 showing an average loss of 26 points. With the exception of one child who gained two points, all children showed losses, the range being from —8 points to —45 points. Ten of the twelve children lost 15 or more points in IQ.

While numbers of cases are small in these groups, the remarkable contrast between the environment of the experimental transfer group and the contrast group, and the associated marked reversals in mental growth trends make the findings highly significant. Such a radical shift in environment as was experienced by each of the children in the experimental group would scarcely occur in an unselected sampling of children in their own home more than two or three times in a thousand cases.

A follow-up study on these two groups of children is very revealing. Eleven of the thirteen children in the experimental group were subsequently placed in adoptive homes, one remained in the school for feebleminded and one was returned to the Orphanage but continued retardation made adoptive placement inadvisable.

The eleven children placed in adoptive homes were re-examined approximately two and one-half years following the close of the experimental period. The mean IQ was 101.4 with no child having an IQ below 90. Changes in IQ following the end of the experimental period were from +16 points to —5 points. With the exception of one child, change was in the direction of increase in IQ. The greatest gain (16 points) was made by a child placed in a superior adoptive home, whereas the child showing a loss was in a home considered far below the average of the group.

Of the twelve contrast children, only one child was placed in an adoptive home, and that a marginal one. Six at later ages were transferred to the school for feebleminded, not as "house guests" but as residents, inasmuch as deterioration was so marked that it seemed improbable that placement outside an institution could be attained.

As the program continued, our concern for the Orphanage children included those of preschool ages. Children admitted between the ages of two and one-half to five and one-half years of age, or those in the Hospital Nursery reaching two and one-half years of age were placed in the two preschool cottages, one for girls and one for boys. It seemed to us that other than reasonably adequate physical and medical care, little was done to enrich the life experiences of the children at these ages. The elementary school program only went down as far as the kindergarten level.

These cottages were of red brick two-story construction, with total floor space equivalent to that of an average sized private dwelling. Upstairs there was one large dormitory with an adjacent "Sunday" closet containing the childrens' "good" clothes. Next to the dormitory was the matron's room. There were no toilet facilities on the upstairs floor.

On the ground floor at the front of the building was the parlor. This was functionally interpreted in the truest New England sense. In other words, it was a room only to be entered on special occasions when there were guests. The children seldom were allowed to enter this room and never in numbers. If the Superintendent visited the cottage or prospective adoptive parents, one specific child might be brought in to meet them. All furniture was strictly for adult usage. Next was a small utility room back of which was a larger room and off of this an enclosed sunroom. The children were essentially limited to these last two rooms. Then, of course, there was a dressing room and bathroom facilities.

Each cottage housed from thirty to forty preschool age children. Only one matron was in charge of each cottage, assisted by four or five reluctant older girls from the Orphanage. These older girls resented being detailed to look after the children in the preschool cottages and would have much preferred being outside playing rather than having to look after "those brats." The matron's duties were overwhelming, including the mending of clothing for all the children, bathing and toilet activities and general physical care. The children did not have their meals in their own cottage but went to a main dining room which accommodated approximately 500 children. Under such circumstances, it was impossible to individualize the children. The children were dressed on the basis of what clothes were available in terms of size and those clothes which had come back from the laundry. In other words, one week Johnny might wear a given set of clothes and the next week Robert might have the same. There was nothing that a child could call his own except perhaps his toothbrush, and under these circumstances we frequently had our doubts as to whether that was his own.

When the children were outside of the cottage, there was little opportunity for free play and the use of large play equipment. By far the greater amount of outside time was spent marching in line on the walks of the campus. If a child saw a pretty butterfly and darted out of line to get it, this was a cardinal offense and duly punished. The greater portion of the waking hours was spent sitting elbow to elbow on benches against the wall in the sunroom with an older girl to literally and figuratively stand over them with a big stick. Toys and play materials scarcely existed. These children, therefore, lived a pretty sordid life, and emotionally were starved for love and affection. If an adult visitor came in, it was a real treat simply to be able to touch the hem of his coat or to grasp a finger of his hand. To be actually picked up and loved a little was an overwhelming treat.

Several of us on the staff at the Child Welfare Station were interested in the possibility of introducing a preschool program for these children. This interest was also shared by the Superintendent of the Orphanage. Our interest included both a desire to do something in meeting the needs of these children and also in making use of this setting for further research studies on the growth and development of preschool children living in underprivileged circumstances. For years, Dr. Beth Wellman had been responsible for a series of research studies on children in attendance at the University Preschool Laboratories. However, these studies were limited to children from superior homes and involved all of the variables relating to the children living in individual homes. In the Orphanage setting, such home variables would be limited to two "homes", namely the two cottages for preschool children. The Board of Control agreed to build on the Orphanage campus a preschool building, and the Child Welfare Station was to furnish the trained teachers during this three-year period with the privilege of carrying on rather extensive research studies relating to the effect of a preschool educational program functioning in such a setting. The building included an ample play yard enclosed by a picket fence. This outlay gave the impression of an oasis in the desert. Adequate play materials and play equipment were purchased both for inside and outside activities.

A control group of children were matched on a large number of variables, including chronological age, intelligence quotient, mental age, sex, nutritional status, and physical condition as evaluated by the pediatricians examination and length of residence in the Orphanage. Thus, one group would attend preschool and the other would not. Other than the hours spent in preschool by the experimental group, both groups lived in the same two cottages under comparable conditions. It was indeed heartrending to be walking along the walks and have a little youngster run up to you and ask, "Why can't I attend preschool?" Before the experimental group started to preschool, both groups were given all manner of tests and examinations and then periodically thereafter.

This, then, was the other "first headstart," back in the 1930's. When the preschool building was completed and furnished, a tea was held the day prior to the actual entrance of the children. All of the matrons and staff members at the Orphanage were invited. We wanted them to have a feeling of sharing in this project. They were much impressed with the preschool layout and quite interested in the project. However, we were repeatedly warned that these children were not like other children and that they could not be handled in the same way.

The next morning the children arrived for their first day in preschool, approximately fifteen of them. At first they were stunned by the layout, but in a matter of minutes they were dashing all over the place, and a status of bedlam and chaos reigned. Children grabbed whole armfuls of toys, rushing madly about the place and accosting each other for possession. There were many conflicts, and toys were thrown around in wild fashion. Many times they were deliberately thrown down the cement steps to the basement storeroom. The teachers were totally unprepared to meet such a situation, and practically lost their minds. It was with a great sigh of relief that the children were finally herded out and back to the cottages, somewhat earlier in the day than had been planned. An extensive council of war was held shortly thereafter, resulting in an emergency telephone call being placed to the Child Welfare Research Station requesting much additional teaching assistance. It was arranged that Research Assistants in Graduate Training be sent down to the Orphanage in relays, one group staying for a week and then being replaced by another; also, it was decided that for awhile the numbers of children initially in attendance would have to be greatly reduced.

On the next day a total of five children were permitted to attend preschool, and there were seven or eight teachers to look after them. This sort of ratio was maintained for several days. It was during this period that we had great concern for fear the Board of Control might visit the Orphanage to see how the project was getting on. Had that happened, we fear that the project would have been rather short-lived, as the question would have been raised as to what manner of school this was wherein therefore more teachers than pupils.

During this early period, we began to wonder whether or not the admonitions which we had been given that these children were not like other children might not be true and were seriously questioning whether or not these children could become like other children. Before positive learning could take place, several other things had to happen. There had to be a great deal of unlearning.

In keeping with policies of all good preschools, orange juice or tomato juice was served at mid-morning. It was desired that the children informally and leisurely come up and get their glass of juice, wipe their mouth with a colored tissue napkin, and then deposit the soiled napkin in the waste basket. That was not the way it turned out. The children rushed madly for the orange juice. They were delighted with the colored paper napkins but refused to throw them in the waste basket and went around most of the day clutching them closely and saying, "Mine, mine." In this setting, we wanted to individualize each child as much as possible. Accordingly, some such provision had been made in designing the building. For example, in the coat room, each child had an individual locker with a specific small picture identified with his name. Also, under each locker was a drawer for him to keep his own prized possessions. We had assured the children that things would be safe there. We were wrong. They were not safe there for some time to come.

The meaning and usage of play materials to these children were not what might normally be expected. A picture book to many of these children simply meant something to produce sound effects by turning the pages, which could be augmented by tearing and destroying pages. The fact that these pages contained interesting and pleasant vicarious experiences affording relaxed enjoyment was scarcely comprehended. Thus, the many problems confronting us can be appreciated. With fewer children and the larger teaching staff, it was possible to bring order out of chaos. Being loved and amounting to something gave new life and drive. With some freedom and choice they learned how to get individual pleasure and at the same time respect group needs and rights. Sharing and taking turns became a part of their life experience.

After two or three weeks with these five children it was possible to gradually introduce new children into the setting, one or two at a time. Also, it was interesting and genuinely satisfying to see the children who had had some experience in the preschool setting helping the new ones to adjust to the program. This in turn gave them a feeling of accomplishment, and after several weeks, it was possible to carry on the program with approximately twenty children, as had been planned, and four regular teachers.

Another interesting sidelight should be mentioned. With the introduction of the preschool an attempt was made to increase the children's ability for self-help. For example, in the toilet situation, they were taught to wash their faces and hands and to become more reliant in looking after their toilet needs. This initially necessitated a radical change in clothing. Prior to the introduction of the preschool, the children had worn long underwear, coveralls, long black stockings and black shoes, as it had earlier been felt that provision of snowsuits would be prohibitive in cost. Under these circumstances, self-help at the toilet was rather a physical impossibility at these ages and had been discouraged. Entirely new clothing was therefore provided, in keeping with that of preschool children in their own homes, and along with this they were encouraged to look after their own toilet needs. The children were quite thrilled with this and proud of their accomplishments. For a while this constituted somewhat of a problem. Some of the little boys who had learned to go to the toilet by themselves, had to demonstrate this achievement to others out on the campus, and, in short order, a number of the matrons came to us in great concern fearing that the children were becoming immoral and wondering just what the preschool was doing to these children. It took a number of conferences and informal reassuring sessions to point out to the well-meaning adults just what this meant. Here was a natural pride in a new achievement, and it was quite understandable that the children would want to demonstrate this to others. We gave reassurance that in keeping with the customs of our society, children were being taught to go to the toilet and urged the matrons to refrain from calling the children bad and immoral. We urged them to treat the situation in a matter-of-fact sort of way and said that, given a little time, the problem would disappear. This, of course, proved to be the case in spite of some anxious moments.

Our findings following the three-year research period, were unexpected. If we had any preconceived ideas, it was to the effect that probably the preschool group would show some increase in intelligence and that the control group would remain relatively constant. However, we were in for some definite surprises. It was true that the experimental group did show *some slight gains* in intelligence-on an average, approximately five points increase in IQ. Children at the lower levels of intelligence made the greatest gain, and a few at the highest levels showed slight losses. *In other words, the preschool setting had the effect of offsetting somewhat the deadening effects of cottage life.* On various other measures, there was marked improvement. As might be expected, social competence and self-help showed remarkable gains. Also, there were marked increases in language and vocabulary development. Our great surprise came in connection with the control group. Instead of level of intelligence being constant, the average IQ of the group declined approximately five points. As has been previously mentioned, some of the children were in the Orphanage from two to three years, and it was indeed a surprise to us to find that children initially of normal intelligence exposed to such conditions for a period of two or three years could deteriorate to a level classifiable as functionally feebleminded. Eight children formerly included in this study were subsequently transferred to the school for feebleminded. Such transfer was not made for developmental purposes, but on the basis of age and retardation, it was felt that they would need continuous institutionalization. Six of these children came from the control group and only two from the preschool group, not withstanding the fact that the preschool and control groups were originally equated on a basis of intelligence. Also, the two transferred from the preschool group had been in attendance less than one hundred days, which was the point at which differences of intelligence began to emerge.

And now, let us again turn our attention to the children placed in adoptive homes in infancy. Three groups of the original group of 147 were studied. Group One was made up of children wherein the following requirements could be met: 1) there be an intelligence test on the mother and that she have an IQ of 75 or less; 2) the child be placed in a permanent adoptive home in infancy; and 3) we have a measure of intelligence on the child following placement. Concerning fathers in this group, we let the chips fall where they would. In other words, there was no restriction as to intelligence level of fathers; however, actually evaluation of educational and occupational status showed them to be heavily weighted on the lower end of the distribution. A total of 87 children met this requirement. The average intelligence quotient of the mothers was 63. The mean IQ of this group of 87 children was 105.

Group Two was made up of children wherein each and every true father represented a selection downward in terms of socio-cultural factors. This group included only those children whose biological fathers were unskilled or slightly skilled laborers and who had been placed in permanent adoptive homes in infancy. There were 111 children who met these requirements and were included in Group Two. The average level of intelligence of these children was represented by a mean IQ of 110.

The children in Group Three represented the overlap between Group One and Group Two. In other words, for each child in this group there was adequate history and information on both the biological mother and father. The father must have been an unskilled or semi-skilled laborer, and the mother must have had an intelligence test with a result showing an IQ of 75 or less, and further, the child must have been placed in a permanent adoptive home in infancy. A total of 31 children met these requirements. When we think back to those days, we recognize that in most accepted and approved adoption policies of that time, seldom if ever would such a child have had the advantages of an adoptive home, but rather would have been placed in an institution or, at best, in a paid foster home for extended observational care. This, then, becomes a very sizeable group. The average IQ for these children was 104.

Therefore, it can reasonably be concluded that children of mothers with low intelligence or from fathers with low occupational status, or from a combination of both, placed in adoptive homes at infancy, obtain a mental level which equals or exceeds that of the population as a whole. The frequency with which cases showing mental retardation appear is no greater than might be expected from a random sampling of the population as a whole, and the frequency with which cases having superior intelligence appears is somewhat greater than might be expected from a random sampling.

Dr. Skodak and I did what we thought was "A Final Follow-up Study of 100 Adopted Children." A review of the scientific literature will reveal that scarcely, if ever, has a study been reported wherein the same children placed in adoptive homes in infancy have been studied over a continuum of time and up to and including adolescence. It was our feeling, therefore, that in these various studies, a longitudinal study of children in adoptive homes from infancy to adolescence was a must. This study, hence, covers a period of time from 1932 through 1946. From the 147 children reported in our first study, all placed in adoptive homes under six months of age (and at an average age of three months), it was possible to study 100 of them during this fifteen-year period. In most instances of course, adoption had been completed following the first examination and arrangements for subsequent visits were made on a gentlemen's-agreement basis. Also, it should be stated that these years included the period of World War II when there was much moving about the country. It, therefore, seemed quite significant that it was possible to study the same 100 children over such a long period of time. In the scientific article reporting this study, we have given careful evaluation to the factors both relating to the 100 children which were included, and to the others, which for one reason or another were lost to the study;

and it can be stated that the final group of 100 can be taken as representative of the larger group.

In long-time research studies there are many problems to be faced. One is that of continuity of the same investigating personnel. In this we were very fortunate, as all examinations were made by Dr. Marie Skodak and myself. Dr. Skodak left the Child Welfare Research Station in 1940, and subsequently became Director of the Flint Guidance Center of Flint, Michigan. However, it was possible to get her back to Iowa in 1941, and in 1946, for an extended period of time to carry on follow-up examinations.

These 100 children were first examined at an average age of two years and two months, at which time the mean IQ was 107. The second examination was made when the children were four years and three months of age on an average, and at that time the mean IQ was 112. The third examination was made when the children were at an average age of seven years. At that time the mean IQ was 115. It had been planned to make a fourth examination when the children were around nine or ten years of age; however, that came during World War II when some of us were on active military duty, and there was a problem of gas rationing, lack of transportation facilities and reduced staffs. So, an evaluation could not be made at that time. However, the last and final round was made in 1946, and at that time the children represented an average age of thirteen years, six months.

Both the 1916 and 1937 revisions of the Stanford-Binet were given, except for not repeating common items. Where a given item was of somewhat greater difficulty in one standardization than in the other, the more difficult presentation was administered first. *Using the 1916 revision, the average IQ of these thirteen year olds was 107. On the 1937 revision, the mean IQ was 117.* Without considering the clinical implications of the differences between the two standardizations, for purposes of this study it will be seen that both measures indicate a level of intelligence above average. Therefore, it can be concluded on the basis of this longitudinal study that the intellectual level of the children has remained consistently higher than would have been predicted from the intellectual, educational, or socio-economic level of the true parents and is equal to or surpasses the mental level of own children in environments similar to those which have been provided by the adoptive parents.

From time to time, the investigators at the Iowa Child Welfare Research Station have been accused of feeling that heredity doesn't count and that environment is everything. This is definitely not the case. We have at all times been aware of the importance of good sound biological heredity. However, these studies do point up the fact that with a given endowment and constitution the range of modifiability in development is much greater than had previously been assumed. For example, a given infant of sound constitution can either become a graduate of a university and a competent self-supporting citizen, or can become an incompetent, retarded, inadequate, individual requiring institutional care, depending upon what happens to him from infancy to adulthood.

We were able to make a follow-up in the early 1960's of the 13 children involved in the so-called institutional headstart program where babies were reared in the company of fond mentally retarded girls, and of the 12 in the contrast group. The remainder of these remarks are excerpts from a report of the present status of those groups, to be published soon as a Monograph of the Society for Research in Child Development.

Of the 13 children in the experimental group, all are self-supporting, and none are wards of any institutions—public or private. Two of the children in the experimental group, one boy (case 1) and one girl (case 6), earlier spent some time in a state correctional school; (however, both have since married). Of the 24 children in the second generation 14 are boys and 10 are girls, with a mean of 2.7 and a median of three children per family.

In the contrast group of 12 children, at the time of the interviews, five had continued to be wards of state institutions, four at a state institution for the retarded (cases 14, 18, 21, and 25) and one (case 20) in a state hospital for the mentally ill. A sixth child (case 15), committed in infancy to the state orphanage, was later transferred to a state institution for the mentally retarded where she resided until her death at 15 years of age. Of the four who were wards of the state institution for the mentally retarded, two were in residence at the institution (cases 14 and 18), one was out on trial visit with his grandmother (case 25) and another (case 21) on a protected vocational training placement.

Out of four females in the contrast group, two were sterilized in late adolescence to preclude the possibility of procreation in the event that they were placed out on work placements at older ages.

Of the 12 children in the contrast group, only two individuals (males) have married, and one of them is now divorced. This individual (case 22) has one child, a boy, who is living with the mother. The other (case 19) has four children and maintains a nice home, which he owns. His is the only instance of home ownership among the contrast children. The divorced man rents a modest apartment, and all others—not institutionalized—live in rented rooms in rooming houses, or their equivalent.

There are marked differences between the two groups in educational attainment. School grades completed for individual cases in the experimental group, and their spouses, and for individual cases in the contrast group are shown in Table I. Means and medians are shown in Table II.

In the experimental group, the average grade completed (all thirteen cases) is 11.68, with a median at grade 12. Excluding the two cases not placed in adoptive homes (cases 2 and 9), the mean is 12.8 and the median 12. One child—a male—has a B.A. degree from a state university; another—male—graduated from a business college, and three of the girls (cases 3, 4, and 13) have from one semester to two and a half years of college education.

Education of their spouses is comparable to that of subjects in the experimental groups. The average grade completed was 11.6 with a median at 12.0 for the eleven married cases. Excluding the spouse of the one child in the experimental group who was never placed in an adoptive home (case 2), who had only a sixth grade education, the mean for spouses was 12.2 and the median 12.0.

TABLE I

EDUCATION OF INDIVIDUAL CASES

Experimental Group			Spouses		Contrast Group		
Case No.	Sex	Grade Completed			Case No.	Sex	Grade Completed
1	M	11	F	12	14	F	2
2	F	5	M	6	15	F	2
3	F	14.5	M	12	16	F	4
4	F	14.5	M	12	17	M	3.4
5	F	10	M	9	18	M	0
6	F	11.5	M	12	19	M	12.5
7	F	12	M	14	20	M	8
8	F	12	M	12	21	M	2
9	F	6	—		22	M	3
10	M	14.3	F	9	23	F	6
11	M	16.3	F	16	24	M	2
12	F	12	—		25	M	2.5
13	F	12.7	M	14			

TABLE II

MEAN AND MEDIAN EXPERIMENTAL AND CONTRAST GROUPS COMPARISONS OF EDUCATION FOR HIGHEST GRADE COMPLETION

Measure	Experimental Group (N = 13)	Their Spouses (N = 11)	Contrast Group (N = 12)
Mean	11.68	11.60	3.96
Median	12.00	12.00	2.75

Educational levels of the subjects in the contrast group are o fa much lower order than those of the experimental group. Based on the best information available, the average grade completed was 3.95 with a median at 2.75 (Table II). Using the t test, the difference between the means of the experimental and contrast groups was statistically significant, $P<.001$.

Only one subject in the contrast group had an education beyond the eigthth grade.

Marked differences are shown between the two groups. In the experimental group, the three male subjects are respectively a vocational counselor, a real estate sales manager, and a staff sergeant in the Air Force. Vocational achievements of the females in the experimental group cannot be compared directly with those of males for two reasons: there are not equal opportunities for advancement, and early marriage terminates vocational advancement or materially changes the pattern. In the present study, eight of the ten girls have married, and two of these married shortly after leaving school without any previous employment.

Of those who have been employed, one taught elementary school grades, one was a registered nurse, one was a licensed practical nurse, one took a beauty course, passed State Board examinations and served in that capacity for a while, one was a clerk in an office, another—after graduation from high school—took the examinations and was accepted as a stewardess for an airline, but married instead. Following her marriage, for a short time she was a dining room hostess in a motel. Two were domestics in private homes. The latter two were those who never were placed in adoptive homes.

In the contrast group, four individuals were residents of state institutions and unable to hold down jobs in a community. Work accomplishments are limited to unskilled tasks assigned to patients on a ward. Of the seven that were employed and living in communities, one, a male, was still a ward of an institution for the mentally retarded, but out on a vocational training assignment. He washes dishes in a nursing home, earns $60 a month and board and room.* Two others, one male and one female, previously wards of a state institution for the mentally retarded, have been discharged from State supervision, and are dishwashers in small restaurants. One of the girls remained in the orphanage from infancy to 17 years, was then returned to her mother and works in a cafeteria. Her duties—folding napkins around silverware. On paydays her mother calls for her check and deposits it in the bank for her.

One of the boys has been in and out of the institution for the mentally retarded for many years. When "out" he lives with his grandmother. He occasionally mows a neighbor's lawn, and brings the groceries home to his grandmother. (Subsequent to completing the interviews for this study, it has been learned that he now is domiciled at one of the county homes).

Another one of the boys is a "floater," his travels having taken him from coast to coast. His vocational activities have included picking chickens in a produce house, washing dishes in a hospital kitchen, and recently doing the heavy packing for shipment in a stationery company. The investigator made one trip to Iowa and two to the West Coast before locating him.

Still another one of the boys is an employee in the institution for the mentally retarded, where he was a patient for many years. Upon reaching adulthood, it was felt that his retardation was not sufficient to justify his being kept as a resident. Placement in a community was attempted, but this failed completely. He was then placed on the employees' payroll but continued to live in a patient ward. Subsequently, he was made a regular employee, and transferred to the employees' home. He works as assistant to the head gardener. This is a good example of an "institutionalized" product. Having spent his entire life in an institution, at this late date he could not adjust to placement in the outside world.

The last of the employed subjects in the contrast group to be accounted for is the man previously referred to as standing out from the group. He is a composer and typesetter for a newspaper in a city of 300,000. His income is easily equal to that of all other employed contrast group members combined.

In the original study, the 13 children in the experimental group, all mentally retarded at the beginning of the study, experienced the effects of early intervention which consisted of a radical shift from one insti-

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* Subsequent to the time of interview he completed his vocational training assignment and was discharged from the institution for the mentally retarded.

3

tutional environment to another institution which provided a much higher degree of one-to-one mother surrogate-child emotional relationships, and superior developmental stimulation. This was followed by placement in adoptive homes for 11 of the children.

The contrast group of 12 children, initially at a higher level of intelligence, were exposed to a relatively non-stimulating orphanage environment over a prolonged period of time.

In the present adult follow-up study, all cases have been located after a lapse of 21 years, with appropriate information secured on each one. Continuing into adulthood, the two groups have maintained the divergent pattern. All 13 children in the experimental group are self-supporting, and none is a ward of any institution, public or private. In the contrast group of 12 children, one died in adolescence following continued residence in a state institution for the mentally retarded; 4 were still wards of institutions, one in a mental hospital, and the other 3 in institutions for the mentally retarded.

In education, disparity between the two groups is striking. The contrast group completed a median of less than third grade. The experimental group completed a median of 12th grade. Four of the subjects have had one or more years of college work. One has received a B.A. degree and continued for graduate training.

Marked differences in occupational levels exist between the two groups. In the experimental group all are self-supporting, or married and functioning as housewives. The range is from professional and business to domestic service, the latter being represented by the two girls who were never placed in adoptive homes. In the contrast group, four or 36 per cent are institutionalized and unemployed. Those who are employed, with one exception, are characterized as "hewers of wood and drawers of water." Using the t test, the difference between the means (based on the Warner Index of Status Characteristics applied to heads of households) was statistically significant, $P < .01$.

Educational and occupational achievement and income for the 11 children from the experimental group compare favorably with the 1960 U.S. Census figures for Iowa and for the United States in general. Their adult status is equavalent to that which might have been expected of children by birth living with their natural parents in homes of comparable sociocultural levels. Where the children have married, their marriage partners have been of comparable sociocultural levels.

Eleven of the 13 children in the experimental group are married, and nine of these have a total of 28 children of their own, with an average of three children per family. On intelligence tests, these second generation children have IQ's ranging from 86 to 125 with a mean of 103.9 and a median of 104. In no instance was these any indication of mental retardation, or demonstrable abnormality. Those of school age were in appropriate grades for age.

Only two of the subjects in the contrast group have married. One had one child and subsequently was divorced. Psychological examination of this child revealed marked mental retardation, with indications of probable brain damage. Another, male subject, has a nice home and family. There are four children, all of average and above average intelligence.

The costs to the state for the contrast group, for whom intervention was essentially limited to custodial care, was approximately five times that of the cost for the experimental group, in which the intervention included enriched environmental experiences, and a close emotional relationship between child and mother surrogate. Furthermore, it seems a safe prediction that for at least four of the cases in the contrast group, costs to the state will continue, at a rate in excess of $200 per month, for another 20 to 40 years. The 11 children in the experimental group at the beginning of the study evidenced marked mental retardation. The developmental trend was reversed through planned intervention during the experimental period. The program of nurturance and cognitive stimulation was followed by placement in adoptive homes providing love and affection and normal life experiences. The normal average intellectual level attained in middle childhood has been maintained into adulthood.

It can be postulated that if the children in the contrast group as well as the experimental group of the present study could have been placed in suitable adoptive homes, or some other appropriate equivalent in early infancy, that most or all of the children from both groups could have achieved within the normal range of development.

It seems obvious that under present day conditions that are still countless numbers of infants born with sound biological constitutions and with potentialities for development well within the normal range, who will become mentally retarded and a burden to society unless appropriate intervention occurs. It is suggested by the findings of this study and substantiated by other studies published in the past 20 years, that we have sufficient knowledge to design programs of intervention which can counteract the devastating effects of poverty, sociocultural deprivation and maternal deprivation.

Since this was a pioneering, descriptive type of study, and with a small number of cases, it would be presumptuous to attempt to identify specific components in a cause and effect type of relationship. Rather, the observations of Macfarlane, Allen and Honzik (1962), seem particularly appropriate to this study as well: "We speculated about the possible explanation for these differences, but the fact emerges that personality needs much more detailed investigation into the situational factors and combinations of factors, including inter-personal relations, same sex and cross sex expectancies, and child training processes, disruptions and changes in personality relationships, if we are to point up the important factors in personality development which these simple sib order findings have thrown into relief. . . . The other findings relating to problems of health, nutritional, and maturational status, IQ, and IQ variability, and to characteristics of the mothers are too fragmentary and too unsystematically covered in this report to summarize. Even these fragmentary data seemed worth including if for no other reason than to point out the multifactor nature of personality and behavior dynamics, and to emphasize the necessity of avoiding over-generalization at the present state of our limited knowledge, and of avoiding premature theoretical closure until, from more samples of growing children, a representative sample of biosocial facts is available and integrated."

In the past, much has been written concerning the hazards of predicting later intelligence from intelligence tests given in early childhood. The problem has frequently been confounded by limiting the prediction formula to test-retest scores, and thus leaving out one of the most important items in the formula—namely, what happened to the individual during the time interval between tests.

Hunt (1964) has most aptly pinpointed the problem: ". . .In fact, trying to predict what the IQ of an individual child will be at age 18 from a DQ obtained during his first or second year is much like trying to predict how fast a feather might fall in a hurricane. The law of falling bodies holds only under the specified and controlled conditions of a vacuum. Similarly, any laws concerning the rate of intellectual growth must take into account the series of environmental encounters which constitute the conditions of that growth."

The divergence in mental growth patterns between children in the experimental and contrast groups is a striking illustration of this concept.

PROGRAM #51

EDUCATING AMERICAN INDIAN CHILDREN

OVERVIEW:

The American Indian child is caught between two cultures. He is exposed to divergent value systems, and to different educational philosophies. He brings his cultural differences into the classroom, where he is taught the ways of culture that may, at times seem quite strange to him. The problems of educating these children will be discussed.

CRITICAL VOCABULARY:

Future (in terms of the Indian)
Time (in terms of the Indian)
Saving (in terms of the Indian)

Questions to consider during your readings and the telecast:

1. Concerning education, what are some cultural differences between the Indian and the American cultural concept of education?
2. How does family life differ on the reservation as compared to the American modal pattern of life?
3. How has the U. S. Government fostered some of the tragic difficulties of today's Indians?
4. How do parental attitudes differ from the Indian to other American parents?
5. What knowledge and skills must a teacher of Indian children bring into the classroom?

Required Reading:

Magary and Eichorn: Reading #62

PROGRAM #52

EDUCATING CHILDREN FROM SPANISH SPEAKING HOMES

OVERVIEW:

Children from Spanish speaking homes not only bring a different language into the classroom, but, often times, a culture that is most dissimilar to that of the average American. These linguistic and cultural differences require different teaching techniques. The way of helping Spanish speaking children manifest their potential will be discussed.

CRITICAL VOCABULARY:

Barrio
Bicultural

Questions to consider during your readings and the telecast:

1. How can the teacher best seek understanding of the cultural differences of the Spanish speaking student?
2. What unique problems does the teacher face in teaching reading to Spanish speaking pupils?
3. How do different degrees of bilingualism affect intellectual performance in the classroom?
4. What psychological needs must the teacher be especially sensitive to with many Spanish speaking children?

Required Reading:

Magary and Eichorn: Reading #63

PROGRAM #53

INSTRUCTIONAL MATERIALS AND INSTRUCTIONAL TECHNOLOGY IN SPECIAL EDUCATION

Guests: Dr. Robert McIntyre, Project Director, USC
Instructional Materials Center for Special
Education, 2120 West 8th Street, Los Angeles
Dr. Herbert Miller, Chairman, Instructional
Technology, School of Education

OVERVIEW:

This program will be concerned with the impact of newer methods of instruction, recent teaching materials and instructional technology now available.

CRITICAL VOCABULARY:

Informational Retrieval
ERIC
Computer Assisted Instruction (CAI)
Programmed Instruction
Teaching Machine
Talking Typewriter

Questions to consider during your readings and the telecast:

1. In which areas of special education has instructional technology made its greatest impact?

2. In what ways has technology helped the handicapped to compensate for a specific sensory deficit?

3. How have the use of computer retrieval and the national network of instructional material centers made research into any specific methodology that much easier?

No special Readings.

PROGRAM #54

REVIEW OF COURSE AND PROJECTION OF SERVICES FOR EXCEPTIONAL CHILDREN INTO THE FUTURE

Questions to consider during the telecast:

1. How have your attitudes changed regarding the handicapped as a result of this course?
2. Why is prevention of all kinds of physical, emotional and educational handicaps an important concern of education?
3. What new organizations have you learned about?
4. What careers have you learned about which serve the handicapped?
5. In what ways will the handicapped and gifted be treated and educated in the year 2000?
6. Have you tried to talk a friend or acquaintance who has skills in helping people to consider working with exceptional children?

APPENDIX A

STANDARD TEXTBOOKS IN THE AREA OF EDUCATION and Psychology of Exceptional Children

Cat. No.	
	Abraham, Willard, *A Guide for the Study of Exceptional Children*, Porter Sargent, 1956.
371.92 B	Baker, Harry J., *Introduction to Exceptional Children*, 3d ed., Macmillan, 1959.
371.9 B 233.	Barbe, Walter B., *The Exceptional Child*, Center for Applied Research on Education, Inc., New York, N. Y. 1964.
371.9 B786.	Bowers, Joan E., Clement Josie, Frances, Marion I. Johnson, Marion Campbell, *Exceptional Children in Home, School and Community*, Dent, J.M. & Sons (Canada) Lmtd., 1960.
136.76 C955P	Cruickshank, W.M., *Psychology of Exceptional Children and Youth*, Prentice-Hall, 1955.
371.92 C955.	Cruickshank, W.M., and Johnson, G.O., *Education of Exceptional Children and Youth*, Prentice-Hall, 2nd edition. 1967.
371.9 D923.	Dunn, L.M. (ed.) *Exceptional Children in the Schools*, Holt, N.Y., 1963.
371.9 F	Frampton, Merle, E. & Rowell, Hugh G. (eds.) *Education of the Handicapped*, Vol. I & II, World Book Co., N. Y., 1938.
371.92 F	Frampton, Merle, E. & Gall, Elena, D. (eds.) *Special Education for the Exceptional*, Vol. I, II, III, Porter Sargent, 1955.
371.92 G242P	Garrison, Karl C., and Force, Dewey G., *Psychology of Exceptional Children*, 4th ed., Ronald Press, 1965.
136.76 G649e	Goodenough, Florence, *Exceptional Children*, Appleton-Century-Crofts, 1956.

Cat. No.	
	Gowan, John C. and Demos, George D. (eds.) *The Guidance of Exceptional Children*, David McKay Co., Inc. New York, 1965.
	Harring, Norris G. and Schiefelbusch, Richard L., *Methods in Special Education*, McGraw-Hill, 1967.
371.92 H	Heck, Arch O., *Education of Exceptional Children*, 2d ed., McGraw, 1953.
132.2 N.277S	Hellmuth, Jerome, (ed.) *The Special Child in Century 21*, Sequin School, Seattle, Washington, 1964.
370.6 N	Henry, Nelson B., ed., *Education of Exceptional Children*, 49th Yearbook, Part II, National Society for the Study of Education, The University of Chicago Press, 1950.
	Jenks, Wm. F. (eds.) *The Atypical Child*, Washington, D.C., Catholic University of America Press, 1954.
371.9 J82e	Jordan, Thomas E., *The Exceptional Child*, Charles E. Merrill Books Inc., 1962.
371.9 K59c	Kirk, Samuel A., *Educating Exceptional Children*, Houghton-Mifflin, 1962.
136.76 K59b	Kirk, Samuel A., Weiner, Bluma, B. (eds.) *Behavioral Research on Exceptional Children*, The Council for Exceptional Children, Washington, D.C., 1963.
132 L893c	Loutitt, C.M. (ed.) *Clinical Psychology of Exceptional Children*, 3d ed. Harper, 1957.
371.9 M188c	Magary, James F. and Eichorn, John R. (eds.) *The Exceptional Child: A Book of Readings*, Holt, Rinehart and Winston, Inc. 1960.
371.92 M197e	Magnifico, L.X., *Education for the Exceptional Child*, Longmans, 1958.
618.92 M386c	Martmer, Edgar E., *The Child with a Handicap*, Charles Thomas, Springfield, Ill., 1959.

Cat. No.	
618.92 M621s	Michal-Smith, Harold, Ph.D., Kastein, Shulamith, (eds.) The Special Child, New School for the Special Child, Bureau of Publications, Seattle, Washington, 1962.
301.427 R823e	Ross, Alan, O., The Exceptional Child in the Family, Grune and Stratton, New York, 1964.
371.9 R854u	Roucek, Joseph S., The Unusual Child, Philosophical Library, Inc., 1962.
	Roucek, Joseph S., The Difficult Child, Philosophical Library, Inc., 1964.
371.9 S285c	Salvin, S.T. & Light, Beulah, S. Curricula, Methodology and Habilitation of the Multiply Handicapped, School of Education, University of Southern California, Los Angeles, 1963.
136.76 S318p	Scheidemann, Norma V., The Psychology of Exceptional Children, Vol. I, Houghton-Mifflin, 1931.
136.76 S318p	Scheidemann, Norma V., The Psychology of Exceptional Children, Vol. II, Houghton-Mifflin, 1937.
	Siegel, Ernest, Special Education in the Regular Classroom, John Day & Co., 1969.
	Telford, Charles W., and Sawrey, James M., The Exceptional Individual, Prentice-Hall, 1967.
136.76 T174R	Trapp, E. Phillip & Himmelstein, Phillip (eds.) Readings on the Exceptional Child, Appleton-Century-Crofts, N.Y., 1962.
618.92 U211c	Wallin, J.E. Wallace, Children with Mental and Physical Handicaps, Harper, 1949.

APPENDIX B

MATERIALS USEFUL TO PARENTS IN UNDERSTANDING EXCEPTIONAL CHILDREN

I. For Parents of the Mentally Retarded Child

Abraham, W., Barbara, A Prologue, New York, Holt, Rinehart and Winston, Inc., 1958.

Buck, P., The Child Who Never Grew, New York, The John Day Company, Inc., 1950.

Egg, Maria, When a Child is Different, New York, The John Day Company, Inc., 1964.

French, E. L., and Scott, C., Child in the Shadows, Philadelphia, J. B. Lippincott Co., 1960.

Junker, K. S., The Child in the Glass Ball, New York, Abingdon Press, 1964.

Kirk, S. A., You and Your Retarded Child, New York, The Macmillan Comapny, 1958.

Levinson, A., The Mentally Retarded Child: A Guide for Parents, New York, The John Day Co., Inc., 1952.

National Association for Retarded Children Pamphlets: "The Three R's for the Retarded," and "The Mentally Retarded Child at Home, a Manual for Parents."

Public Affairs Committee Pamphlets: No. 210 "The Retarded Child" and No. 219, "How to Help Your Handicapped Child."

Slaughter, S. S., The Mentally Retarded Child and His Parent, New York, Harper & Row, Publishers, 1963.

II. For Parents of the Neurologically Impaired and Physically Handicapped Child

Anderson, Camilla M., Jan, My Braindamaged Daughter, Portland, Oregon, The Durham Press, 1963.

Avery, Marie, and Alice Higgins, *Help Your Child Learn How to Learn*, Englewood Cliffs, New Jersey, Prentice-Hall, Inc., 1962.

Bindt, J. A., *A Handbook for the Blind*, New York, The Macmillan Company, 1953.

Bottke, Eleanor, Clari Bare, and Neva Waggoner, *Self-Help Clothing for Handicapped Children*, Chicago, The National Society for Crippled Children and Adults, 1962.

Graham, R., and Gloria Colovini, *Guide for Parents Requesting Home Instruction for Physically Handicapped Children*, Springfield, Illinois, State Department of Public Instruction, 1961.

Hutton, Daniel A., *Understanding Cerebral Palsy: A Handbook for Parents*, Erie, Penn., The Erie County Crippled Children Society, 1962.

Lewis, R. A., and L. Lehtinen, *The Other Child*, New York, Grune and Stratton, Inc., 1959.

McDonald, Eugene T., *Understanding Those Feelings: A Guide for Parents and Everyone Who Counsels Them*, Pittsburgh, Stanwix House, Inc., 1962.

Miers, E. S., *Why Did This Have to Happen, An Open Letter to Parents*, Chicago: The National Society for Crippled Children and Adults, 1957.

Myklebust, H., *Your Deaf Child: A Guide for Parents*, Springfield, Illinois, Charles C. Thomas, Publisher, 1950.

Neville, Joan *So Briefly My Son*, London, Hutchinson & Company (Publishers), Ltd., 1962.

Public Affairs Committee Pamphlets: No. 197, "Doing Something for the Disabled" and No. 212, "Gains for the Handicapped Child."

Spock, Benjamin, and Marian O. Lerrigo, *Caring for Your Disabled Child*, New York, The Macmillan Company, 1964.

Stern, E., and E. Castendyck, The Handicapped Child: A Guide for Parents, New York, A. A. Wyn, Inc., Publishers, 1950.

III. For Parents of the Emotionally and Socially Disturbed Child

American Institute of Family Relations Pamphlet, "Home Study Course in Social Hygiene Guidance and Sex Education."

American Social Health Association Pamphlet, "Emotional Problems of Growing Up."

Bruch, H., Don't be Afraid of Your Child: A Guide to Perplexed Parents, New York, Farrar, Straus & Giroux, Inc., 1952.

Canadian Mental Health Association, How to Know Your Child, New York, Human Relations Aid, 1954.

Child Study Association of America Pamphlets: "Aggressiveness in Children" and "When Children Ask About Sex."

Child Study Association of America, Parent's Questions, New York, Harper & Row, Publishers, 1947.

Mayer, Greta, and Mary Hoover, When Children Need Special Help with Emotional Problems, New York, Child Study Association of America, 1961.

National Association for Mental Health Pamphlets: "Being a Good Parent" and "Keystones in Psychological Thinking About Young Children."

Science Research Associates Pamphlets: "How to Live With Parents"; "Self-Understanding--A First Step to Understanding Children"; "How to Live With Children"; "Understanding Hostility in Children"; "Fears in Children."

Spock, B., The Common Sense Book of Baby and Child Care, New York, Duell, Sloan and Pearce, 1946.

Stern, Edith M., Mental Illness: A Guide for the Family, 4th ed. New York: Harper & Row, Publishers, 1962.

Symonds, P., The Dynamics of Parent-Child Relationships, New York, Columbia University Press, 1949.

U.S. Children's Bureau Pamphlets: "Your Child 1 to 6"; "Your Child 6 to 12"; "The Adolescent in Your Family."

Van Riper, C., Teaching Your Child to Talk, New York, Harper & Row, Publishers, 1950.

Wolf, A., and S. Szasz, Helping Your Child's Emotional Growth, New York, Doubleday and Company, Inc., 1954.

Note: The following directory is a very useful publication is a very useful publication for the school psychologist who is called upon to make recommendations for educational and therapeutic placement of emotionally disturbed children.

Directory of Resources for Mentally Ill Children in the United States, 1964, lists and describes 147 residential and day facilities that provide service to seriously disturbed children in separate units, distinct and apart from adult care. Both public and private resources are listed. The 96-page directory, published jointly by the National Association for Mental Health and the National Institute of Mental Health, is available for $2.00 from the NAMH, 10 Columbus Circle, New York, New York 10019.

IV. For Parents of the Gifted Child

Abraham, W., Common Sense About Gifted Children, New York, Harper & Row, Publishers, 1958.

Brumbaugh, Florence N., and Bernard Roshco, Your Gifted Child: A Guide for Parents, New York, Holt, Rinehart and Winston, Inc., 1959.

Cutts, N. and N. Moseley, Bright Children: A Guide for Parents, New York, G. P. Putnam's Sons, 1953.

Freehill, M., *Gifted Children: Their Psychology and Education*, New York, The Macmillan Company, 1961.

Strang, Ruth, *Helping Your Gifted Child*, New York, Sutton and Co., 1960.

V. To Parents of the Deaf and the Hard of Hearing Child

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APPENDIX C
GLOSSARY OF TERMS RELATING TO EXCEPTIONAL CHILDREN

Aberration. A deviation, usually regarded as abnormal.

Ability. Actual power, whether inherited or acquired, to perform an act.

Academic aptitude. Combination of abilities needed for schoolwook.

Acoustic. Pertaining to the sense of hearing, or to the science of sound.

Acuity. Acuteness or clearness; amount of sensory perception, especially vision.

Adjustment. Adaptation, accommodation, conformity.

Adjustment mechanism (see Defense mechanism)

Affective reactions. Reactions such as emotions, feelings, attitudes, and sentiments.

Age, chronological. Length of time a person has lived; synonymous with life age or calendar age.

Age, mental. Level of intelligence in terms of the age when the average child reaches that level of intellectual development; a child has a mental age of "n" years if his performance on an intelligence test is the average performance of a large number of children of the same culture whose chronological age is "n" years.

Age norm. A score that is typical of children of a certain age; an average score.

Age scale. A table that gives the normal score for children of each age.

Agraphia. Impairment, or loss of ability to write because of damage to the brain; inability to write words, although motor functioning is normal--a type of aphasia.

Albinism. Congenital hereditary absence of pigmentation, either partial or complete, from eyes, hair, or skin.

Alexia. A language disorder in which the individual, although having normal vision, is incapable of interpreting written words; word blindness, or the inability, resulting from brain damage, to understand the meaning of the written word.

Allergen. A substance that may cause allergy in some people.

Allergy. A condition of unusual sensitiveness to foreign substances, e.g., pollen, feathers, dust, wool, dyes, hair, and fur.

Ambidextrous. The ability to use both hands equally well.

Ambivalence. A combination of opposing feelings simultaneously toward a person or situation.

Amentia. Mental deficiency.

Amnesia. Loss of memory due to a brain injury, shock, or similar cause.

Anomaly. A deviation from the general or normal pattern.

Anoxemia. Deficient aeration of the blood; deficiency in the oxygen supply of the blood.

Anoxia. Lack of oxygen; oxygen deficiency resulting from a diminished supply of oxygen to the brain tissues.

Anticonvulsant drugs. Substances administered to control the number and nature of convulsions.

Anxiety neurosis. A condition characterized by apprehension and fear, and accompanied by other symptoms such as irritability, excitability, and depressed states.

Aphasia. A loss or impairment of the ability to communicate or understand written or spoken language due to injury to the language centers of the brain; a disorder of the speech function resulting from damage to the brain; the inability to use or to understand speech because of brain damage.

Aphonia. Loss of voice; inability to utter vocal sounds, due to some structural or functional defect in the vocal cords.

Apraxia. A brain disorder characterized by loss of ability to manipulate and use common objects and to execute planned movements.

Aptitude test. see test, prognostic

Arithmetic mean. The average which elementary school pupils learn to compute; the sum of a collection of values divided by the number of values (see average).

Articulation. The pronunciation of speech sounds.

Articulatory defects. Indistinct or confusing speech resulting from failure or inability to produce the commonly accepted speech sounds.

Astigmatism. Defective curvature of the refractive surfaces of the eye as a result of which a ray of light is not sharply focused on the retina but is spread over a more or less diffused area; a condition of the eye, caused by the irregular curvature of the lens, which results in blurred vision.

Ataxia. A type of cerebral palsy in which the kinesthetic sense has been disturbed and there is difficulty in maintaining balance; injury to the cerebellum resulting in a muscular incoordination characterized by a lack of balance.

Athetosis. A type of cerebral palsy in which involuntary movements are superimposed on normal voluntary muscle movements; for instance, a child reaching for a book with jerky movements which he cannot control.

Audiogram. A graph of an individual's hearing ability as measured in decibels by an audiometer.

Audiometer. An electrical instrument used to test an individual's ability to hear.

Auditory. Pertaining to the sense of hearing.

Auditory canal. The canal of the ear leading to the ear-drum.

Auditory discrimination. The ability to discriminate between sounds.

Aural. Having to do with the ear.

Average. A central, typical, representative datum; the following are averages: the mode, the median, and the arithmetic mean.

Avocation. An interest or hobby unassociated with the earning of a livelihood.

Babbling. Inarticulate speech.

Basal age. The year or level at which all items are passed on the Stanford-Binet examination.

Battery. See tests, battery of.

Bilateral. Having two sides; pertaining to both sides.

Binaural. Pertaining to both ears.

Binocular. Involving both eyes.

Birth trauma. An injury to the infant received during or due to the process of being born.

Blindisms. Mannerisms often associated with blindness.

Block. A cessation of activity occasioned by emotional disturbance.

Braille. A system of reading and writing for the blind, in which a combination of projections are used to represent letters.

Capacity. A potential ability, or one largely inherited but not fully developed.

Cardiac. Having to do with the heart.

Cardiograph. Instrument for recording action of the heart.

Cataract. A thickening of the lens of the eye which results in impairment of vision.

Cerebral meningitis (See Meningitis)

Cerebral palsy. A disorder of the nervous system accompanied by motor disturbance.

Chorea. A motor disturbance with gradually developing involuntary jerky movements; spasmodic twitching of a muscle, indicative of disorder of motor-control areas of the nervous system.

Chronological age. See age, chronological.

Claustrophobia. Excessive and unwarranted fear of being shut in.

Cleft palate. A split in the roof of the mouth involving hard or soft palate or both.

Cluttered speech. Rapid, distorted speech.

Cochlea. A cavity of the inner ear shaped like a snail shell.

Coefficient of correlation. A measure of the degree of relationship between two sets of data.

Compensation. A psychological device by which an individual tries to provide a satisfying substitute for incompetency, inferiority, or inadequacy, whether real or felt, by adopting a particular type of behavior or attitude; a defense mechanism by which an individual covers up or counterbalances a real or imagined inferiority in an effort to reduce tension.

Compulsive behavior. Activities carried on as a result of an idea persisting in the consciousness despite efforts to remove it.

Conditioned response. See response, conditioned.

Conditioned stimulus. See stimulus, conditioned.

Conditioning. Attaching a response, previously evoked by a certain stimulus, to a new stimulus, the substitution being brought about by associating the two stimuli either in time or place.

Conductive deafness. Deafness of the middle ear or outer ear.

Conflict. A condition that arises when an individual is faced with motives that are incompatible.

Congenital. Existent or potential at, or prior to, birth; existing at birth, as for example, a brain injury; not necessarily hereditary.

Congenital amputation. A child who is born lacking one or both arms, hands, or legs, is said to have a congenital amputation.

Conjunctivitis. Inflammation of the mucous membrane that lines the inner surface of the eyelid and is reflected over the forepart of the eyeball.

Convulsion. An involuntary and violent contraction of an extensive set of muscles.

Cornea. The strong transparent membrane, about one twenty-fifth of an inch in thickness, in the front part of the eye.

Correlated. Closely connected; systematically or reciprocally related.

Cretin. A type of mentally retarded person.

Cretinism. A type of mental deficiency resulting from a deficiency in thyroid secretion.

Deafness. Total absence of hearing.

Deafness, nerve. Deafness of the inner ear; the auditory nerve is affected.

Deafness, perceptive. See deafness, nerve.

Decibel. One-tenth of the unit of intensity, or loudness of sound called the bel, named in honour of Alexander Graham Bell; sounds of 10 decibels are ten times louder than those of 0 decibel; those of 20 decibels are one hundred times louder; those of 30 decibels are one thousand times louder, etc.; the following are a few noise levels: air drill, 130 decibels; heavy traffic, 100 decibels; very loud radio in home, 80 decibels; very noisy restaurant, 70 decibels; moderate restaurant noise, 50 decibels; quiet radio in home, 40 decibels; average house, 30 decibels; quiet garden, 20 decibels; whisper, 20 decibels; rustle of leaves, 10 decibels, 0 decibel, threshold of sound (just audible).

Defense mechanism. A technique by means of which anxiety and tension may be reduced.

Delinquency. Violation of the code of the large social group.

Delinquent. An offender against the laws of society; usually applied to children and youths.

Diagnosis in teaching. Determination of the nature of a specific difficulty in learning.

Diagnostic test. See test, diagnostic.

Diopter. A unit of measurement used to express the strength of a lens.

Diphthong. A composite speech sound composed of two vowels.

Diplegia. Paralysis affecting like parts on both sides of the body; bilateral paralysis--legs more often affected than arms.

Distribution of intelligence. The intelligence of any typical cross section of people is assumed to be distributed in a pattern known as the curve of normal probability; a few have extremely low intelligence, many have average ability, and a few have superior ability.

Dominance (in reference to eyes, feet, and hands). Existence of preference in the use of eyes, feet, or hands.

Dominance, mixed. Absence of preference in the use of eyes, feet, or hands.

Drive. A physiological tension that can be relieved by specific activity, e.g., the relief of hunger by eating.

Drooling. Dripping or flowing of saliva from the mouth.

Dysarthria. A condition in which the individual is deficient in normal use of the speech organs, such as the lips, jaws, tongue, and vocal cords.

Dysfunction. Absence of complete normal function--differs from paralysis, in which there is loss of function.

Dysgraphia. Incorrect formation of words in writing, resulting from brain damage.

Dyslalia. Difficulty of speech due to abnormality in the tongue or other organs of speech.

Dyslexia. An impairment of the ability to understand the written word, resulting from brain damage.

Dysphasia. Partial aphasia; a disorder characterized by disjointed speech.

Dystrophy, muscular. Metabolic disorder where there is degeneration and wasting of muscle tissue; a progressive wasting disease of the muscles.

Echolalia. Meaningless repetition of words.

Ego. The self; in psychoanalytic usage, the conscious part of the mind which acts as the mediator between the id and the obstacles to its satisfaction.

Egocentric. Centering around the self.

Electrocardiogram. A graphic picture of electrical charges caused by contraction of the heart muscles.

Electroencephalogram. The record provided by the use of the electroencephalograph.

Electroencephalograph. An instrument for recording the very small electrical currents in the brain.

Embryo. An organism developing in the womb during the first five or six weeks after conception.

Emmetropia. Refractive condition of the eye in which vision is normal or perfect.

Emotion. A stirred-up condition involving the visceral organs and the functions of circulation and respiration; its presence is usually associated with an impulse towards some action.

Encephalitis. Inflammation of the brain; brain fever.

Endocrine glands. Organs that produce secretions called hormones which pass into the blood or lymph stream.

Endogenous. From within--often used to describe condition arising from factors within, such as an hereditary condition.

Enrichment. Adaptation of content and methods of teaching to pupils of intellectual superiority; content is extended and broadened; teaching methods characterized by emphasis or reasoning and creativity.

Enuresis. Involuntary emission of urine.

Epilepsy. A disease characterized by convulsive seizures of varying degrees of severity; a number of causes have been given, e.g., brain injury, heredity, environmental conditions, and maladjustment of personality.

Equivalent form. Another form of a test, which has different content but equal difficulty.

Erythrophobia. Excessive and unwarranted fear of blushing.

Esophagus. The connecting tube between the pharynx and the stomach.

Eustachian tube. A tube extending from behind the nose and throat into the middle ear.

Eyedness. The dominant eye.

Exogenous. From without--often used to describe a condition arising from factors without, such as a non-hereditary condition.

Expected grade level. See grade level, expected.

Extroversion. Literally, a turning outward (see also Introversion).

Facing reality. Accepting the conditions and objects in the world as they actually exist.

Fagin-stealing. Stealing by a child acting under an adult's directions.

Fetus. The organism developing in the womb from the sixth week following conception until the birth at full term.

Fibroplasia, retrolental. See retrolental fibroplasia.

Field-culture. The impact of cultural forces in relation to environmental setting in which they operate.

Footedness. The preferred foot in pedal activities, i.e., the foot with which one leads in going forward, in kicking a ball, etc.

Frequency. The number of vibrations per second; the range of frequencies in the keyboard of a piano is from 27 to 3,500 vibrations per second; a man's speaking voice has frequencies from 100 to 150 vibrations per second; the voice of a woman has twice the frequency of a man's; the range of audibility is about 20 to 30,000 vibrations per second. (See pitch.)

Frustration. The perception of an interference with the satisfaction of a need or drive.

Glaucoma. A disease of the eye in which the pressure within the eye is increased and which causes progressive loss of vision.

Grade level, actual. The grade level at which the pupil is being instructed.

Grade level, expected. The grade level at which a child is able to work according to his intelligence quotient and chronological age.

Grade level, true. The grade level of a pupil as indicated by his score on a standard achievement test.

Grade norm. The average score for children in a particular grade.

Grand mal. A disturbance of consciousness during an epileptic seizure; accompanied frequently by drooling, frothing at the mouth, and a disturbance of the rhythm of breathing; an epileptiform seizure in which there are severe convulsions and a loss of consciousness.

Group test. See test, group.

Group therapy. Group psychotherapy; the treatment of several individuals as a group.

Handedness. The hand preferred in activities involving the hand.

Harelip. Congenital cleft of upper lip.

Hemiplegia. Paralysis of the arm and leg on one side of the body.

Hemophilia. A hereditary disease of the blood, transmitted to male children by the mother, in which the time for coagulation of the blood is longer than normal.

Heterogeneous classes. Classes consisting of children unselected with respect to academic ability or mental age.

Homogeneous classes. Classes consisting of children selected with respect to academic ability or mental age or both.

Hydrocephalus. A condition usually characterized by an abnormally large head due to excessive fluid in the cranium.

Hydrocephaly. A condition in which there is excessive fluid in the head; the head is enlarged; usually associated with low intelligence.

Hyperopia. Far-sightedness caused by the rays of light falling behind the retina owing to the shortening of the eyeball.

Hypertonia. Excessive muscle tone.

Hypo-thyroidism. A condition caused by diminished secretion of the thyroid gland.

Hysteria. A psychoneurosis characterized by emotional disturbances; an impairment of some mental, sensory, or motor function resulting from an unconscious effort to escape from an unpleasant situation, often partial loss of memory, paralysis, etc.

Id. In psychoanalytic usage, the unconscious, dynamic part of the self; reservoir of the primitive drives with constantly demand satisfaction.

Identification. The defense mechanism by which an individual identifies himself with persons, groups, institutions, or objects as a means of satisfying certain needs or relieving frustrations.

Idiopathic. Of unknown cause.

Idiosyncrasy. Characteristic or trait peculiar to an individual.

Imbecile. A mentally defective person having an I.Q. of approximately between 20 and 49.

Impulse. Motive, drive, tendency.

Incidence. Range of occurrence or influence of a condition or disease.

Incontinence. Lack of control of bladder or bowels or both.

Individuality. That which differentiates one person from another.

Infantile. Reverting to infant characteristics or traits.

Inferiority feeling. An attitude characterized by lack of confidence, with feelings of unworthiness and inadequacy.

Inhibit. To repress or restrain.

Insecurity. Apprehensiveness, sense of hazard.

Intelligence quotient. The ratio of mental age to chronological age, multiplied by 100;

$$I.Q. = \frac{M.A.}{C.A.} \times 100$$

Intelligence test. See test, intelligence.

Intensity (of sound). A property of sound which is measured in decibels; loudness is the physiological counterpart of intensity. (See decibel.)

Introversion. Literally, a turning inward (see also Extroversion).

Iris. Coloured membrane in front of eye; an opening in the iris is called the pupil.

Isolate. A person who does not mix freely with others either from choice or from lack of popularity.

Jacksonian epilepsy. A form of epilepsy in which the seizure is limited to one leg or to one part of the body, usually without the loss of consciousness.

Juvenile muscular dystrophy. A type of muscular dystrophy affecting both sexes.

Kinesthesia. The sense by which special receptors in the muscles and joints recognize weight, motion, and position.

Kleptomania. Stealing under irresistible pressures that cannot be explained by an examination of the superficial needs or desires of the person.

Lalling. The incorrect pronunciation of the tongue-tip sounds.

Laryngologist. A physician who deals with conditions pertaining to the larnyx or organ of voice.

Larynx. The opening at the upper end of the trachea (or windpipe) containing vocal cords; often referred to as the voice-box.

Laterality. Hand, foot, or eye preference.

Legg-Perthes. A disease of the head of the thigh-bone.

Lesion. Change in tissue resulting from injury or disease.

Leukemia. A fatal disease of the blood-forming organs characterized by a marked increase in the number of white blood cells in the blood and the presence of immature cells.

Level of aspiration. Goal or standard of achievement one sets for himself.

Libido. A psychoanalytic concept referring to psychic vital drive of the individual.

Lisp. Incorrect pronunciation of the sibilant sounds of s, z, sh, ch, and j.

Longitudinal study. A study in which the same children are studied in successive years.

Lordosis. An inward curve of the spine.

Macrocephaly. Abnormal condition involving an enlargement of the head; possession of a large head; usually associated with low intelligence.

Maladjustment. Inability to adapt one's self, to conform, or to arrive at an accommodation.

Malformation. Any congenital irregularity or irregular development in the formation or correlation of parts in an organism.

Malingering. Using a convenient illness to make possible the avoidance of responsibilities.

Malnutrition. Imperfect assimilation and nutrition; a condition resulting from inadequate diet.

Malocclusion. Faulty meeting of the opposing teeth in the upper and lower jaws; faulty bite.

Mammamania. Unusually close attachment of a child to his mother resulting in fear of separation.

Mannerism. Habitual, automatic oddity of behavior.

Maturation. Growth and development resulting from inner forces; the process of development of an organism.

Maximal year. The year or the level on the Stanford-Binet examination at which the subject fails all items.

Mean. See arithmetic mean.

Median. The centre point on the scale of a frequency distribution; 50 per cent of the cases fall above the median and 50 per cent below. (See average.)

Meningitis. Inflammation of the meninges. Cerebral meningitis may be due to trauma, tuberculosis, or to extension of inflammation from neighboring structures. Spinal meningitis is an inflammation of the membranes of the brain and spinal cord.

Mental age. See age, mental.

Mental deficiency. Often used as a synonym for feeblemindedness.

Mental factor. A variable considered in an investigation of mental capacity, e.g., reasoning ability.

Mental growth. Changes in intelligence associated with normal development.

Mental retardation. See retardation, mental.

Microcephalus. Unnatural smallness of the head due to imperfect development.

Microcephaly. Possession of a small head, usually associated with low intelligence.

Migraine. Severe periodic headache usually accompanied by nausea.

Mirror writing. See writing, mirror.

Mixed dominance. See dominance, mixed.

Mode. The most frequently occurring value in a frequency distribution of scores. (See average.)

Mongoloid. A type of mentally retarded person.

Monograph. A paper, bulletin, or small booklet dealing intensively with one subject.

Moron. A mentally defective person with an I.Q. of between 50 and 69 approximately.

Muscle spasm. An involuntary, convulsive contraction.

Muscular dystrophy. See dystrophy, muscular.

Myopia. Near sightedness caused by the rays of light falling in front of the retina owing to the elongation of the eyeball.

Mysophobia. Excessive and unwarranted fear of becoming dirty through contact with dirty things.

Myxedema. A disorder characterized by lethargy and dullness resulting from a lack of thyroid secretion.

Negativism. A form of behavior characterized by rebelliousness, stubbornness, or refusal to follow suggestions or to face reality; resistance to proposals made by others.

Nerve deafness. See deafness, nerve.

Neurasthenia. A psychoneurosis characterized by aches, pains, fatigue, irritability, and bodily discomfort.

Neurosis. (see Psychoneurosis)

Non-language test. See test, non-verbal.

Non-verbal test. See test, non-verbal.

Norm. An average measurement obtained for a large homogeneous group.

Normal distribution. The distribution of data in accordance with the normal probability, or Gaussian, curve.

Nystagmus. A disorder of the eye in which there is rhythmical movement of the eyeball; an involuntary, rapid, jerking movement of the eyeball,--may be either lateral, vertical, rotary, or mixed.

Obesity. The accumulation of fat that is detrimental to health.

Obsession. A compulsive impulse to think about one idea or to perform in a painstaking manner some action devoid of obvious significance.

Occupational therapy. Any activity, mental or physical, medically prescribed and professionally guided, to aid a patient in recovery from disease or injury.

Oculist. A physician trained to diagnose and treat diseases and refractive errors of the eye.

Ophthalmologist. Synonymous with oculist.

Optic atrophy. A degeneration of the fibres of the nerve leading to the retina of the eye.

Optician. One who makes glasses according to the prescription of the oculist.

Organic. Pertaining to the organs.

Organismic age. Age of an individual based upon the average of a number of different ages, such as skeletal age, mental age, educational age, social age.

Orthodontia. The practice of straightening the teeth and jaws to correct faulty occlusion, or bite; see malocclusion.

Orthopaedic cripple. A person deficient in the use of his body or limbs because of loss, defect, or deformity.

Orthopedic. Pertaining to the correction of physical (skeletal) deformities.

Orthopsychiatry. The field of psychiatry especially concerned with mental disorders during childhood and adolescence.

Ossicles. The three small bones in the middle ear.

Ossification. Formation of bone; state or process of being converted into bone.

Otitis media. Infection of the middle ear.

Otologist. A physician who specializes in the treatment of the ear.

Otosclerosis. Hardening of the ossicles causing progressive loss of hearing.

Over-achievement. Achievement at a level beyond that expected as a result of tests of intelligence.

Pamphobia. Fear excited by many causes, e.g., animals, accidents, thunder.

Paralipophobia. Excessive and unwarranted fear of causing serious trouble by forgetting something.

Paraplegia. Paralysis of the lower part of the body, including both legs.

Pathology. The science of diseases; condition produced by disease or injury.

Pediatrician. A specialist in children's diseases.

Percentile. A rank in a hypothetical group consisting of 100; a person has a percentile rank of 37 in a group when he is just taller (heavier, brighter, etc.) than 37 per cent of the group.

Performance test. See test, performance.

Peripheral. Pertaining to the external boundary or surface.

Peristalsis. The alternate waves of constriction and dilation of the muscles which cause the movement of food from the mouth into and along the alimentary canal.

Perseveration. The tendency of an idea to persist and to influence subsequent experience.

Personality. Everything that a person is, does, or can do at a given time.

Personality profile. A graphic representation of the personality characteristics or traits of an individual.

Personality test. See test, personality.

Petit mal. A brief disturbance of consciousness during an epileptic seizure; more common in children than in adults; a mild epileptiform seizure characterized by dizziness or other sensations--a momentary lapse of consciousness.

Pharyngeal. Pertaining to the pharynx.

Pharynx. The tube that connects the mouth and the esophagus to the nasal passages.

Phobia. Excessive and unwarranted fear.

Phonation. The production of vocal cords.

Phonetics. The science of speech sounds; the analysis of words into their sound elements.

Physical therapy. Treatment of disability, injury, and disease by such measures as massage, exercise, application of heat, light, water, and electricity.

Physique. Bodily structure and organization.

Pigment. Colour.

Pitch. A property of a sound depending upon the frequency, or number of vibrations per second, of the sounding body; a high note has a high pitch; pitch is the physiological counterpart of frequency. (See frequency.)

Point scale. A scale of points used in some intelligence tests instead of a mental age scale, e.g., WISC.

Poliomyelitis. An inflammation of the grey matter of the spinal cord sometimes producing paralysis in certain muscle groups.

Potential. Existing in possibility, not in actuality; the highest level at which a person could perform.

Practice effect. The difference in accomplishment which may result from repetition.

Precocious. Early or rapid development.

Predisposition. The inherited capacity of an individual to develop a certain trait; the trait may not appear unless environmental factors exist.

Procrastination. Persistent postponement of decisions.

Profile chart. Graph or curve formed by uniting the points representing one's scores on each of several kinds of tests or performances.

Profile of scores. A line diagram or graph indicating an individual's standing in a number of respects.

Prognosis. The forecasting of a pupil's aptitude for, or progress in, a subject.

Prognostic test. See test, prognostic.

Projection. Ascribing to others the ideas, feelings, or attitudes that the individual himself has but does not desire to recognize or face; a psychological device by which a person tries to relieve himself of responsibility by attaching it to another.

Projective technique. A testing method in which the subject is required to ascribe his own thoughts and feelings to a stimulus of relatively high ambiguity--designed to determine personal characteristics; a method used in the study of certain personality problems whereby the subject, by his responses, reveals himself unconsciously; synonymous with projective method.

Psychasthenia. A psychoneurosis characterized by abnormal fears, obsessions, and compulsions.

Psychiatrist. A physician trained by intensive study of psychology to treat people with personality disorders.

Psychogenic. Originating in one's mental and emotional life.

Psychological test. See test, psychological.

Psychologist. One who studies human behavior and the causes underlying it.

Psychometric test. See test, psychological.

Psychoneurosis. A mental or emotional disturbance that affects only part of the personality and that is not of sufficient severity to make a person dangerous to society.

Psychopath. A person suffering a mental or nervous disorder characterized by a lack of moral sensibility and emotional control.

Psychosis. A personality disorder of sufficient severity to alienate the person from reality and endanger the safety of others.

Psychosomatic. Pertaining to impaired bodily function of psychological origin.

Psychotherapy. Treatment of mental and emotional disorders by psychological methods.

Puberty. The period of life at which the reproductive organs mature.

Pupil. The "window" of the eye, or opening in the iris, which permits the entrance of light.

Quadriplegia. Paralysis or involvement of all four extremities.

Rapport. Sympathetic understanding; mutual concern and warmth.

Rationalization. The justification of one's behavior through plausible and acceptable but actually irrelevant and unimportant motives; a "face-saving" explanation given to one's self or to others to account for behavior or ideas; the fact that a rationalization is being made is not necessarily apparent to the person making it.

Recessive tendency. Tending to withdraw from the society of others.

Refraction. The change of direction of light when meeting obliquely a medium of density different from that in which it had travelled previously.

Reliability. The reliability of a test refers to its consistency of measurement; the accuracy with which a test measures whatever it measures.

Remedial teaching. Instruction designed to strengthen a weakness uncovered by diagnostic testing and not arising from low intelligence.

Repression. The closing off from conscious awareness of painful memories or thoughts distasteful to the self.

Response. Behavior following the application of a stimulus.

Response, conditioned. A response evoked by a stimulus formerly inadequate to produce the response; the substitution of the new stimulus for the original one was effected by conditioning. (See conditioning.)

Retardation, educational. A pupil is retarded in one or more subjects if his work in them is at a level significantly below the average for children of comparable mental ability; a pupil is retarded educationally if the grade in which he is enrolled is lower than his expected grade level. (See grade level, expected.)

Retardation, mental. Owing to the possible presence of partially compensating factors, it is difficult to assign an upper limit to the intelligence of the mentally retarded; a fairly common classification of children with sub-average I.Q. is given below: slow learners, 80-89; educable mentally retarded, 50-79; trainable mentally retarded, 25-49; untrainable mentally retarded, below 25.

Retina. The membrane at the back of the eye on which, in normal vision, light is brought to a focus.

Retrolental fibroplasia. A dense, fibrous growth behind the lens of the eye which prevents normal vision--usually producing blindness; blindness caused by the use of too much oxygen during a premature infant's life in an incubator.

Reverie. Day-dream.

Rh factor (Rhesus factor). A substance found in the blood of the Rhesus monkey; it is present in the blood of about 85 per cent of human beings who are termed Rh plus; the remainder are Rh minus; if mother and fetus differ in this factor, the child may require special medical attention at the time of his birth.

Rheumatic fever. A disease affecting the heart; cause unknown.

Rigidity. A type of cerebral palsy in which there appears to be interference with the voluntary movements; for instance, when a child wishes to reach for a book on a table, he may find that his arm goes to his side.

Rubella. German measles.

Schizophrenia. Synonym for dementia praecox, literally meaning a splitting off from reality; disturbance of thought, feeling, social behavior, and other functions of the central nervous system.

Seclusiveness. Withdrawal from association with others.

Segregation. Separation from others.

Semicircular canals. Tubes at right angles to each other in the inner ear and containing fluid; this organ gives us our sense of balance.

Sociometric test. See test, sociometric.

Spasm. Involuntary contraction of a muscle or group of muscles.

Spastic hemiplegia. A condition in which one hemisphere or side of the body is affected with spasticity.

Spastic paraplegia. A condition in which both legs are affected with spasticity.

Spasticity. Involuntary contraction of affected muscles when they are suddenly stretched--called stretch reflex--resulting in tenseness and inaccurate, difficult voluntary movement; a type of cerebral palsy in which there are uncontrolled explosive movements of the head and limbs even when the child is resting.

Speed test. See test, speed.

Spina bifida. A congenital defect in the closure of the spine.

Spinal meningitis. (See Meningitis.)

Squint. Synonymous with strabismus.

Stammering. See stuttering.

Standard deviation. A measure of variability; the lower the S.D., the greater is the degree of clustering around the arithmetic mean.

Standardized test. See test, standardized.

Stethoscope. An instrument for the detection of sounds produced within the body.

Stigma (plural, stigmata). A mark or label.

Stimulus. A goad, influence, motive, or incentive.

Stimulus, conditioned. A stimulus that evokes a response formerly associated with another stimulus. (See conditioning.)

Strabismus. A condition in which the two eyes do not focus simultaneously on the same object; squint or "cross-eyes"; failure of the two eyes to direct their gaze at the same object because of muscle imbalance.

Stuttering. Interruption of rhythm of speech by blocks, hesitations, repetitions, prolongations, and interjections; frequently accompanied by tension.

St. Vitus's Dance. See chorea.

Sublimation. Redirection of energy into acceptable or realistic channels; a psychological device by which a person engages in substitute activities to gain satisfaction when he finds the original activity unsatisfying or unpleasant.

Superego. Used synonymously with conscience; in psychoanalytic usage, that part of the self that produces strife and difficulty when the ego follows primitive urges from the id.

Syndrome. A group of symptoms; an aggregate of symptoms that characterize a certain disease or disorder.

Tachistoscope. An instrument that exposes to view objects, letters, or words, for a certain period of time.

Tantrum. Exhibition of temper or ill-humor.

Teacher-made tests. See test, teacher-made.

Test. A device used in the measurement of a quality such as achievement or ability.

Test, achievement. A test constructed to measure the results of learning.

Test, culture-free. An intelligence test constructed so as to be as free as possible from cultural influences.

Test, diagnostic. An examination or test designed to reveal the weaknesses of a pupil in a topic.

Test, group. A test that may be administered to a number of people at the same time.

Test, individual. A test that can be administered to only one person at a time.

Test, intelligence. A test designed to measure the reasoning ability and learning capacity of a person; synonymous with mental test.

Test, non-verbal. A test in which neither written nor spoken language is used by the examiner or subject.

Test, performance. A test in which the subject replies by performing an action such as fitting parts in a puzzle or encircling a picture that belongs with other pictures; it may, or may not, be non-verbal.

Test, personality. A test intended to measure some aspect of the personality.

Test, power. A test in which an attempt is made to measure the highest level of ability or achievement.

Test, prognostic. A test designed to predict a subject's ability to succeed in an academic subject or a form of employment; synonymous with test, aptitude.

Test, psychological. Any test designed to measure the amount of a given psychological quality.

Test, psychometric. See test, psychological.

Test, sociometric. A test designed to find the degree of acceptance of a person by a group of associates.

Test, speed. A test with a time limit so restricted that few, if any, subjects can complete the test within it.

Test, standardized. A test for which norms are given and for which the methods of administration and scoring are prescribed.

Test, teacher-made. A locally constructed, informal test.

Test, verbal. A test requiring knowledge of spoken or written language.

Tests, battery of. A group of two or more tests.

Therapeutic. Pertaining to cure or healing.

Therapy. Any method used to treat a disease or condition; remedial, curative, or healing treatment.

Threshold of discomfort. A sensation at the highest level prior to discomfort or pain; (in loudness of sound, the highest level prior to discomfort or pain).

Tic. A spasmodic moving or twitching of a group of muscles that, on the surface, bears no relation to the individual's problems.

Tonus. Partial contraction of a muscle, leading to muscle firmness or rigidity.

Trainable (child). One with insufficient ability to receive an education, but with enough to warrant training; the upper limit of I.Q. is usually considered to be 49.

Trauma. Any injury to the body caused by violence; a physical wound or an emotional shock leaving a deep psychological impression.

Traumatic experience. A sudden difficult situation that arouses a feeling of helplessness.

Tremor. A condition of trembling of any part of the body, such as the hands, head or fingers.

Triplegia. Paralysis of three limbs.

Truant. A child who is absent from school without the consent of his parents.

True grade level. See grade level, true.

Tympanic membrane. The ear-drum or membrane between the outer and the middle ear.

Unconscious. A psychoanalytic concept referring to that portion of the mind that influences the individual's thinking and actions, and of which the individual is not consciously aware.

Under-achievement. Achievement at a level significantly below that expected as a result of tests of intelligence.

Uninhibited. Free from control, restraint, or repression.

Unit teaching. Organization of learning experiences around a central theme, problem, or purpose; the procedure is usually planned co-operatively by teacher and pupils.

Validity. The accuracy with which a test measures what it purports to measure.

Verbal test. See test, verbal.

Vestibular branch. A branch of the auditory nerve which goes to the semicircular canals in the ear.

Viscera. Organs in the body cavity, e.g., heart, lungs, stomach, liver, kidneys.

Vocalization. Utterance; vocalization begins in the first month of life with coos, grunts, gurgles, sighs, etc.

Vocational school. A school primarily concerned with preparation for an occupation.

Withdrawal. Avoidance of facing an annoying unpleasant situation.

Writing, mirror. Writing, the mirror image of which is correct.